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SEQUENCE LISTING

<110> Ganymed Pharmaceuticals AG
 TÜRECI, Özlem
 SAHIN, Ugur
 HELFTENBEIN, Gerd
 SCHLÜTER, Volker

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<140> US10/573,229

<141> 2006-03-24

<150> PCT/EP2004/010697

<151> 2004-09-23

<150> DE 103 44 799.7

<151> 2003-09-26

<160> 312

<170> PatentIn Version 3.1

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Ala Leu Tyr Gly Leu Gly Leu Leu Leu Thr Pro Pro Leu Ala Leu Phe
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Leu Cys Gly Leu Leu Ala Asn Arg Gln Ser Val Val Met Val Glu Glu
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Trp Arg Arg Pro Ala Gly His Arg Arg Lys Asp Pro Gly Ile Ile Arg
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Tyr Met Cys Ser Ser Val Leu Gln Arg Ala Leu Ala Ala Pro Leu Val
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Trp Ile Leu Leu Ala Leu Leu Asp Gly Lys Cys Phe Val Cys Ala Phe
 115 120 125

Ser Ser Ser Val Asp Pro Glu Lys Phe Leu Asp Phe Ala Asn Met Thr
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Pro Ser Gln Val Gln Leu Phe Leu Ala Lys Val Pro Cys Lys Glu Asp
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Glu Leu Val Arg Asp Ser Pro Ala Arg Lys Ala Val Ser Arg Tyr Leu
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Arg Cys Leu Ser Gln Ala Ile Gly Trp Ser Val Thr Leu Leu Leu Ile
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Ile Ala Ala Phe Leu Ala Arg Cys Leu Arg Pro Cys Phe Asp Gln Thr
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Val Phe Leu Gln Arg Arg Tyr Trp Ser Asn Tyr Val Asp Leu Glu Gln
 210 215 220

Lys Leu Phe Asp Glu Thr Cys Cys Glu His Ala Arg Asp Phe Ala His
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Arg Cys Val Leu His Phe Phe Ala Ser Met Arg Ser Glu Leu Gln Ala
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Arg Gly Leu Arg Arg Gly Asn Ala Gly Arg Arg Leu Glu Leu Pro Ala
 260 265 270

Val Pro Glu Pro Pro Glu Gly Leu Asp Ser Gly Ser Gly Lys Ala His
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Leu Arg Ala Ile Ser Ser Arg Glu Gln Val Asp Arg Leu Leu Ser Thr
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Trp Tyr Ser Ser Lys Pro Pro Leu Asp Leu Ala Ala Ser Pro Gly Leu
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Gly Gly Trp Leu Leu Ser Leu Val Arg Gly Leu Leu Pro Cys Leu Pro
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Pro Gly Ala Arg Thr Ala Glu Gly Pro Ile Met Val Leu Ala Gly Pro
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Leu Ala Val Ser Leu Leu Leu Pro Ser Leu Thr Leu Leu Val Ser His
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Leu Ser Ser Ser Gln Asp Val Ser Ser Glu Pro Ser Ser Glu Gln Gln
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Leu Cys Ala Leu Ser Lys His Pro Thr Val Ala Phe Glu Asp Leu Gln
 100 105 110

Pro Trp Val Ser Asn Phe Thr Tyr Pro Gly Ala Arg Asp Phe Ser Gln
 115 120 125

Leu Ala Leu Asp Pro Ser Gly Asn Gln Leu Ile Val Gly Ala Arg Asn
 130 135 140

Tyr Leu Phe Arg Leu Ser Leu Ala Asn Val Ser Leu Leu Gln Ala Thr
 145 150 155 160

Glu Trp Ala Ser Ser Glu Asp Thr Arg Arg Ser Cys Gln Ser Lys Gly
 165 170 175

Lys Thr Glu Glu Glu Cys Gln Asn Tyr Val Arg Val Leu Ile Val Ala
 180 185 190

Gly Arg Lys Val Phe Met Cys Gly Thr Asn Ala Phe Ser Pro Met Cys
 195 200 205

Thr Ser Arg Gln Val Gly Asn Leu Ser Arg Thr Ile Glu Lys Ile Asn
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Gly Val Ala Arg Cys Pro Tyr Asp Pro Arg His Asn Ser Thr Ala Val
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Ile Ser Ser Gln Gly Glu Leu Tyr Ala Ala Thr Val Ile Asp Phe Ser
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Gly Arg Asp Pro Ala Ile Tyr Arg Ser Leu Gly Ser Gly Pro Pro Leu
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Arg Thr Ala Gln Tyr Asn Ser Lys Trp Leu Asn Glu Pro Asn Phe Val
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Ala Ala Tyr Asp Ile Gly Leu Phe Ala Tyr Phe Phe Leu Arg Glu Asn
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Ala Val Glu His Asp Cys Gly Arg Thr Val Tyr Ser Arg Val Ala Arg
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Val Cys Lys Asn Asp Val Gly Gly Arg Phe Leu Leu Glu Asp Thr Trp
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Ala	Lys	Asp	Thr	Leu	Tyr	His	Val	Leu	Tyr	Ile	Gly	Thr	Glu	Ser	Gly
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Tyr	Leu	Glu	Glu	Leu	His	Val	Leu	Pro	Pro	Gly	Arg	Arg	Glu	Pro	Leu
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Ser	Gln	Gly	Ala	Cys	Leu	Gly	Ala	Arg	Asp	Pro	Tyr	Cys	Gly	Trp	Asp
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Gly	Lys	Gln	Gln	Arg	Cys	Ser	Thr	Leu	Glu	Asp	Ser	Ser	Asn	Met	Ser

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Asp Thr Asp Ala Leu Val Glu Val Leu Leu Arg Ser Gly Ser Thr Ser
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Pro His Thr Val Ser Gly Gly Trp Ala Ala Trp Gly Pro Trp Ser Ser
850 855 860

Cys Ser Arg Asp Cys Glu Leu Gly Phe Arg Val Arg Lys Arg Thr Cys
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Thr Asn Pro Glu Pro Arg Asn Gly Gly Leu Pro Cys Val Gly Asp Ala
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Gly His Tyr Gln Arg Thr Arg Ser Cys Thr Ser Pro Ala Pro Ser Pro
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Gly Glu Asp Ile Cys Leu Gly Leu His Thr Glu Glu Ala Leu Cys Ala
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Thr Gln Ala Cys Pro Glu Gly Trp Ser Pro Trp Ser Glu Trp Ser Lys
965 970 975

Cys Thr Asp Asp Gly Ala Gln Ser Arg Ser Arg His Cys Glu Glu Leu
980 985 990

Leu Pro Gly Ser Ser Ala Cys Ala Gly Asn Ser Ser Gln Ser Arg Pro
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Cys Pro Tyr Ser Glu Ile Pro Val Ile Leu Pro Ala Ser Ser Met
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Ser Thr Leu Val His Pro Ala Thr Pro Asn His Leu His Tyr Lys
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Gly Gly Gly Thr Pro Lys Asn Glu Lys Tyr Thr Pro Met Glu Phe
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Lys Thr Leu Asn Lys Asn Asn Leu Ile Pro Asp Asp Arg Ala Asn
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Phe Tyr Pro Leu Gln Gln Thr Asn Val Tyr Thr Thr Thr Tyr Tyr
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cctggtgagc aagagatgcc acgagtgcct ggcagcaagg aaagctcaag ccatgtgcac    780
aggatcatcac cccacaggta ccacctcttc ctgcaaacia gacgacctcc tttcgggtga    840
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tgtgaagaaa accatcttgt gaggggctgc ctggactggg ctggcagggt gggcctggat    960
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cagccacctg cccagctcg acggcactgg gccagttccc cctctgctct gcagctcggg   1140
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aaaagtcaac tcatttgctg gaaaaaaaaa aaaaaaaaaa   1299

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<210> 26
<211> 273
<212> PRT
<213> Homo sapiens

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<400> 26

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Met Asn Trp Ser Ile Phe Glu Gly Leu Leu Ser Gly Val Asn Lys Tyr
1           5           10          15

```

```

Ser Thr Ala Phe Gly Arg Ile Trp Leu Ser Leu Val Phe Ile Phe Arg
          20          25          30

```

```

Val Leu Val Tyr Leu Val Thr Ala Glu Arg Val Trp Ser Asp Asp His
          35          40          45

```

```

Lys Asp Phe Asp Cys Asn Thr Arg Gln Pro Gly Cys Ser Asn Val Cys
          50          55          60

```

```

Phe Asp Glu Phe Phe Pro Val Ser His Val Arg Leu Trp Ala Leu Gln
          65          70          75          80

```

```

Leu Ile Leu Val Thr Cys Pro Ser Leu Leu Val Val Met His Val Ala
          85          90          95

```

Tyr Arg Glu Val Gln Glu Lys Arg His Arg Glu Ala His Gly Glu Asn
 100 105 110

Ser Gly Arg Leu Tyr Leu Asn Pro Gly Lys Lys Arg Gly Gly Leu Trp
 115 120 125

Trp Thr Tyr Val Cys Ser Leu Val Phe Lys Ala Ser Val Asp Ile Ala
 130 135 140

Phe Leu Tyr Val Phe His Ser Phe Tyr Pro Lys Tyr Ile Leu Pro Pro
 145 150 155 160

Val Val Lys Cys His Ala Asp Pro Cys Pro Asn Ile Val Asp Cys Phe
 165 170 175

Ile Ser Lys Pro Ser Glu Lys Asn Ile Phe Thr Leu Phe Met Val Ala
 180 185 190

Thr Ala Ala Ile Cys Ile Leu Leu Asn Leu Val Glu Leu Ile Tyr Leu
 195 200 205

Val Ser Lys Arg Cys His Glu Cys Leu Ala Ala Arg Lys Ala Gln Ala
 210 215 220

Met Cys Thr Gly His His Pro His Gly Thr Thr Ser Ser Cys Lys Gln
 225 230 235 240

Asp Asp Leu Leu Ser Gly Asp Leu Ile Phe Leu Gly Ser Asp Ser His
 245 250 255

Pro Pro Leu Leu Pro Asp Arg Pro Arg Asp His Val Lys Lys Thr Ile
 260 265 270

Leu

<210> 27
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 27
 ggagtagtca ctcagtagca gc

<210> 28

<211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 28
 gaactcatca aagcagacg 19

<210> 29
 <211> 1528
 <212> DNA
 <213> Homo sapiens

<400> 29
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 tctgtgcgtc ctgcaccac atctttctct gtccctcct tgccctgtct ggaggctgct 180
 agactcctat cttctgaatt ctatagtgcc tgggtctcag cgcagtgcc atggtggccc 240
 gtccttgtgg ttcctctcta cctggggaaa taaggtgcag cggccatggc tacagcaaga 300
 cccccctgga tgtgggtgct ctgtgctctg atcacagcct tgcttctggg ggtcacagag 360
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 agcaaccagg acctgggagc tggggccggg gaagacgcc ggtcggatga cagcagcagc 480
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 gtttatgaat ctgggcagca gatgttccag ggggtcaa atccccca cctgggtac 720
 tcccaccctg gccactctaa cgacctcatg ctcatcaaac tgaacagaag aattcgtccc 780
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 agaatgttca tctctccagc cctgacccc atgtctctg gactcagggt ctgcttcccc 1320
 cacattgggc tgaccgtgtc tctctagttg aaccctggga acaatttcca aaactgtcca 1380

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gggcgggggt tgcgtctcaa tctccctggg gcactttcat cctcaagctc agggcccatc 1440
ccttctctgc agctctgacc caaatctagt cccagaaata aactgagaag tggaaaaaaa 1500
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1528

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<210> 30
<211> 293
<212> PRT
<213> Homo sapiens

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<400> 30

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Met Ala Thr Ala Arg Pro Pro Trp Met Trp Val Leu Cys Ala Leu Ile
1          5          10          15

```

```

Thr Ala Leu Leu Leu Gly Val Thr Glu His Val Leu Ala Asn Asn Asp
          20          25          30

```

```

Val Ser Cys Asp His Pro Ser Asn Thr Val Pro Ser Gly Ser Asn Gln
          35          40          45

```

```

Asp Leu Gly Ala Gly Ala Gly Glu Asp Ala Arg Ser Asp Asp Ser Ser
          50          55          60

```

```

Ser Arg Ile Ile Asn Gly Ser Asp Cys Asp Met His Thr Gln Pro Trp
65          70          75          80

```

```

Gln Ala Ala Leu Leu Leu Arg Pro Asn Gln Leu Tyr Cys Gly Ala Val
          85          90          95

```

```

Leu Val His Pro Gln Trp Leu Leu Thr Ala Ala His Cys Arg Lys Lys
          100          105          110

```

```

Val Phe Arg Val Arg Leu Gly His Tyr Ser Leu Ser Pro Val Tyr Glu
          115          120          125

```

```

Ser Gly Gln Gln Met Phe Gln Gly Val Lys Ser Ile Pro His Pro Gly
          130          135          140

```

```

Tyr Ser His Pro Gly His Ser Asn Asp Leu Met Leu Ile Lys Leu Asn
145          150          155          160

```

```

Arg Arg Ile Arg Pro Thr Lys Asp Val Arg Pro Ile Asn Val Ser Ser
          165          170          175

```

```

His Cys Pro Ser Ala Gly Thr Lys Cys Leu Val Ser Gly Trp Gly Thr
          180          185          190

```

Thr Lys Ser Pro Gln Val His Phe Pro Lys Val Leu Gln Cys Leu Asn
 195 200 205

Ile Ser Val Leu Ser Gln Lys Arg Cys Glu Asp Ala Tyr Pro Arg Gln
 210 215 220

Ile Asp Asp Thr Met Phe Cys Ala Gly Asp Lys Ala Gly Arg Asp Ser
 225 230 235 240

Cys Gln Gly Asp Ser Gly Gly Pro Val Val Cys Asn Gly Ser Leu Gln
 245 250 255

Gly Leu Val Ser Trp Gly Asp Tyr Pro Cys Ala Arg Pro Asn Arg Pro
 260 265 270

Gly Val Tyr Thr Asn Leu Cys Lys Phe Thr Lys Trp Ile Gln Glu Thr
 275 280 285

Ile Gln Ala Asn Ser
 290

<210> 31
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 31
 cagaaaaggt gcgaggatg 19

<210> 32
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 32
 ctgggatgac tcaggagttg g 21

<210> 33
 <211> 636
 <212> DNA
 <213> Homo sapiens

<400> 33
 atgacagaag cagcatcgct tgtccctaag aggccaagga ggctcagagg cagccacaag 60

ctgcgagttc tggcatggcc agtggtcgtg gtggtgaact ttgtttggca gtgcaacggc 120


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gtccccatt ctcgatcccg gggccccaac ctcccatcgg ctcagtcccc cgcccaatct 300
ctgccaggcc cggagctttc ccagaccctt caccacact ccaggctcac tccccgttcc 360
tgggcctggg ccccccttgc acgagtccag ggccagccgt cctcgccttc tgcccgcccc 420
cgtccttcgt tcctggggagc cggccctctc cgcggacca ggcgccccga gcaggcgccg 480
ccgcccgggg gactccgact cagccccgcg gacctacctc ggccgacagt cgggggttcc 540
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```

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<210> 34
<211> 211
<212> PRT
<213> Homo sapiens

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<400> 34

```

```

Met Thr Glu Ala Ala Ser Leu Val Pro Lys Arg Pro Arg Arg Leu Arg
1          5          10          15

```

```

Gly Ser His Lys Leu Arg Val Leu Ala Trp Pro Val Val Val Val Val
          20          25          30

```

```

Asn Phe Val Trp Gln Cys Asn Gly Ser Ile Ala His Thr Phe Leu Glu
          35          40          45

```

```

Leu Ser Phe Ala Cys Pro Gly Gly Arg Tyr Ala Gly Ser Arg Pro Ala
          50          55          60

```

```

Pro Val Ala Gly Met Asp Arg Asp Gln Gln Arg Ala Glu Ser Ala Cys
65          70          75          80

```

```

Val Pro His Ser Arg Ser Arg Gly Pro Asn Leu Pro Ser Ala Gln Ser
          85          90          95

```

```

Pro Ala Gln Ser Leu Pro Gly Pro Glu Leu Ser Gln Thr Pro His Pro
          100          105          110

```

```

His Ser Arg Leu Thr Pro Arg Ser Trp Ala Trp Ala Pro Leu Ala Arg
          115          120          125

```

```

Val Gln Gly Gln Pro Ser Ser Pro Ser Ala Arg Pro Arg Pro Ser Phe
          130          135          140

```

Leu Gly Ala Gly Pro Leu Arg Gly Pro Ser Gly Pro Glu Gln Ala Pro
 145 150 155 160

Pro Pro Gly Gly Leu Arg Leu Ser Pro Arg Asp Leu Pro Arg Pro Thr
 165 170 175

Val Gly Gly Ser Gln Ala Ala Thr Pro Gly Arg Arg Arg Pro Leu Ala
 180 185 190

Glu Pro Pro Arg Ser Leu Pro Ser Ala Gln Ser Gly Leu Ala Arg Gly
 195 200 205

His Ser Ser
 210

<210> 35
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 35
 tgctctcact gtggtcctca g 21

<210> 36
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 36
 tttgtaaagc tccagcgcta c 21

<210> 37
 <211> 969
 <212> DNA
 <213> Homo sapiens

<400> 37
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 ctggggggcc tcatggcggg gccattcatc ctggccaagg acctgtgcct gcagcaggac 180
 cccctgacac agagctacct catcagcacc attttctttg ctccagcatc tgcattgctcc 240
 tgcaagctgc ccattcccca gggaggtagc tttgcttttg tggtaatttc tctggccatg 300
 ctctcccttc cctcctggaa ttgccctgag tggacactca gtgccagcca ggtgaacacc 360

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aactttccag aattcactca gaaatggcag aagaggatcc aagaggggtgc tatcatggtc 420
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ccccgtgatc ggaggcatgt cccaccccc gtgatcggag gcatgaccct gtttggggtc 720
atcactgccg tggggatctc caatctgcag tacgtggaca tgaacttgct caggagcctc 780
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cccagatgc tccagacagg gattctccag cgggaccagg ttgttcagat gctgctgacc 900
atgggcatgt tcatcagtgg atttctgggt tttcttctag acaacaccat ccccgagctc 960
cttcaataa 969

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<210> 38
<211> 322
<212> PRT
<213> Homo sapiens

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<400> 38
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```

Met Lys Asp Cys Arg Asn Asn Gly Lys Asp Cys Gln Ser Ala Pro Ala
1          5          10          15

```

```

Thr Arg Arg His Leu Phe Ser Glu Ala Ala Leu Pro Pro Tyr Arg Leu
          20          25          30

```

```

Ser Gln Gly His Phe Leu Thr Ala Leu Gly Gly Leu Met Ala Val Pro
          35          40          45

```

```

Phe Ile Leu Ala Lys Asp Leu Cys Leu Gln Gln Asp Pro Leu Thr Gln
          50          55          60

```

```

Ser Tyr Leu Ile Ser Thr Ile Phe Phe Ala Pro Ala Ser Ala Cys Ser
65          70          75          80

```

```

Cys Lys Leu Pro Ile Pro Gln Gly Gly Thr Phe Ala Phe Val Val Ile
          85          90          95

```

```

Ser Leu Ala Met Leu Ser Leu Pro Ser Trp Asn Cys Pro Glu Trp Thr
          100          105          110

```

```

Leu Ser Ala Ser Gln Val Asn Thr Asn Phe Pro Glu Phe Thr Gln Lys
          115          120          125

```

Trp Gln Lys Arg Ile Gln Glu Gly Ala Ile Met Val Thr Ser Cys Val
 130 135 140

Arg Met Leu Val Gly Phe Ser Gly Leu Thr Gly Phe Leu Met Gly Phe
 145 150 155 160

Ile Cys Ser Leu Ala Val Ala Pro Thr Asn Cys Leu Val Ala Leu Pro
 165 170 175

Leu Leu Asp Ser Ala Gly Asn Asn Ala Gly Ile Gln Trp Gly Ile Ser
 180 185 190

Ala Met Tyr Cys Phe Val Leu Arg Leu Arg Lys Asp Glu Leu Trp Pro
 195 200 205

Phe Gly Ser Pro Arg Leu Arg Leu Pro Pro Ser Pro Pro Arg Asp Arg
 210 215 220

Arg His Val Pro Thr Pro Val Ile Gly Gly Met Thr Leu Phe Gly Val
 225 230 235 240

Ile Thr Ala Val Gly Ile Ser Asn Leu Gln Tyr Val Asp Met Asn Leu
 245 250 255

Ser Arg Ser Leu Phe Ala Phe Gly Phe Ser Ile Tyr Cys Gly Leu Thr
 260 265 270

Ile Pro Asn Arg Val Ser Lys Asn Pro Glu Met Leu Gln Thr Gly Ile
 275 280 285

Leu Gln Pro Asp Gln Val Val Gln Met Leu Leu Thr Met Gly Met Phe
 290 295 300

Ile Ser Gly Phe Leu Gly Phe Leu Leu Asp Asn Thr Ile Pro Glu Leu
 305 310 315 320

Leu Gln

<210> 39

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide

<400> 39

atggcgggtgc cattcatcct

<210> 40
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 40
 caggagggaa gggagagcat 20

<210> 41
 <211> 1679
 <212> DNA
 <213> Homo sapiens

<400> 41
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 ggccggcgctg ttgctctacc ggatcgcgcg gaggatgaag ccaacgcaca cgatggtcaa 300
 ctgctgggttc tgcaaccagg atacgctggt gccctatggg aaccgcaact gctgggactg 360
 tccccactgc gagcagtaca acggcttcca ggagaacggc gactacaaca agccgatccc 420
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 ccagaccacc aagatcaagc agctggccgc ctctcgctccc cgcgaggagg gcaggatatga 600
 cgaggaggtc gaggtgtacc ggcattcacct ggagcagatg tacaagctgt gccggccgtg 660
 ccaagcggct gtggagtact acatcaagca ccagaaccgc cagctgcgcg ccctgttgct 720
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 ctgcctagc tggctagaca cgctcaagtt cagcaccaca tctttgtgct gcctggttgg 1260
 cttcacggcg gctgtggcca caaggaaggc aacggggcca cggaggttcc ggccccgaag 1320

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gtcagagaag cagccatgac tgcgggggga ggacacacgg atgctcaggc ccaggctttg 1380
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ccccacccta cagccccagg tcctggccca gtccctccac tgcctcgaag agtcagtctg 1500
ccctgccttt tcctttcggg caccaccagc catccccgag tgcctgtag ccactcacca 1560
ctgctgccac ctctctggcc aatggccctt tcactggcct ggtgactgga atgtgggcag 1620
cgcccacaca ggctctggcc catggcttcc tactggcagc tccaggcacc cccctctca 1679

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<210> 42
<211> 392
<212> PRT
<213> Homo sapiens

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<400> 42
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Met Glu Gly Val Ser Ala Leu Leu Ala Arg Cys Pro Thr Ala Gly Leu
1          5          10          15

```

```

Ala Gly Gly Leu Gly Val Thr Ala Cys Ala Ala Ala Gly Val Leu Leu
          20          25          30

```

```

Tyr Arg Ile Ala Arg Arg Met Lys Pro Thr His Thr Met Val Asn Cys
          35          40          45

```

```

Trp Phe Cys Asn Gln Asp Thr Leu Val Pro Tyr Gly Asn Arg Asn Cys
          50          55          60

```

```

Trp Asp Cys Pro His Cys Glu Gln Tyr Asn Gly Phe Gln Glu Asn Gly
65          70          75          80

```

```

Asp Tyr Asn Lys Pro Ile Pro Ala Gln Tyr Leu Glu His Leu Asn His
          85          90          95

```

```

Val Val Ser Ser Ala Pro Ser Leu Arg Asp Pro Ser Gln Pro Gln Gln
          100          105          110

```

```

Trp Val Ser Ser Gln Val Leu Leu Cys Lys Arg Cys Asn His His Gln
          115          120          125

```

```

Thr Thr Lys Ile Lys Gln Leu Ala Ala Phe Ala Pro Arg Glu Glu Gly
          130          135          140

```

```

Arg Tyr Asp Glu Glu Val Glu Val Tyr Arg His His Leu Glu Gln Met
          145          150          155          160

```

```

Tyr Lys Leu Cys Arg Pro Cys Gln Ala Ala Val Glu Tyr Tyr Ile Lys
          165          170          175

```

His Gln Asn Arg Gln Leu Arg Ala Leu Leu Leu Ser His Gln Phe Lys
 180 185 190

Arg Arg Glu Ala Asp Gln Thr His Ala Gln Asn Phe Ser Ser Ala Val
 195 200 205

Lys Ser Pro Val Gln Val Ile Leu Leu Arg Ala Leu Ala Phe Leu Ala
 210 215 220

Cys Ala Phe Leu Leu Thr Thr Ala Leu Tyr Gly Ala Ser Gly His Phe
 225 230 235 240

Ala Pro Gly Thr Thr Val Pro Leu Ala Leu Pro Pro Gly Gly Asn Gly
 245 250 255

Ser Ala Thr Pro Asp Asn Gly Thr Thr Pro Gly Ala Glu Gly Trp Arg
 260 265 270

Gln Leu Leu Gly Leu Leu Pro Glu His Met Ala Glu Lys Leu Cys Glu
 275 280 285

Ala Trp Ala Phe Gly Gln Ser His Gln Thr Gly Val Val Ala Leu Gly
 290 295 300

Leu Leu Thr Cys Leu Leu Ala Met Leu Leu Ala Gly Arg Ile Arg Leu
 305 310 315 320

Arg Arg Ile Asp Ala Phe Cys Thr Cys Leu Trp Ala Leu Leu Leu Gly
 325 330 335

Leu His Leu Ala Glu Gln His Leu Gln Ala Ala Ser Pro Ser Trp Leu
 340 345 350

Asp Thr Leu Lys Phe Ser Thr Thr Ser Leu Cys Cys Leu Val Gly Phe
 355 360 365

Thr Ala Ala Val Ala Thr Arg Lys Ala Thr Gly Pro Arg Arg Phe Arg
 370 375 380

Pro Arg Arg Ser Glu Lys Gln Pro
 385 390

<210> 43

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide

<400> 43

ctacatcaag caccagaacc gcc

23

<210> 44

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide

<400> 44

ggacttcacg gcggaggag

19

<210> 45

<211> 727

<212> DNA

<213> Homo sapiens

<400> 45

aggcagttgc ggggttcagg agttcaggaa aggaggtggg actagagtca acctggaata 60

gctctacagt aacaatggca gcctttttgt tgctgggaca tccatacagg caacttagct 120

ggtgaaagga ctctggattg gttggcagtc tgcttttttt tttccaagggt gatcacttta 180

ctgtagaaga aatgagggtta acagaaaaga gtgagggaga acaacaactc aagcccaaca 240

actctaattgc acccaatgaa gatcaagaag aagaaatcca acagtcagaa cagcatactc 300

cagcaaggca gcgaacacaa agagcagaca cacagccatc cagatgtcga ttgccttcac 360

gtaggacacc tacaacatcc agcgacagaa cgatcaacct tcttgaagtc cttccgtggc 420

ctactgagtg gattttcaac ccctatcgat tgctgtctct ttttgagctt tatectgaat 480

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aaaagatcgg actgccatc atactccacc tcttcgcact ctccaccctc taactctaca 600

agtttttctt tcttacaatt ctttcccttt ctttctttat tcttcttgta cttctgcttc 660

tgctttttat tattgtcttc attctgatct tcttctgatt cttttgtttc aataaacagc 720

aatgagc 727

<210> 46

<211> 168

<212> PRT

<213> Homo sapiens

<400> 46

Met	Arg	Leu	Thr	Glu	Lys	Ser	Glu	Gly	Glu	Gln	Gln	Leu	Lys	Pro	Asn
1				5				10						15	

Asn Ser Asn Ala Pro Asn Glu Asp Gln Glu Glu Glu Ile Gln Gln Ser
 20 25 30

Glu Gln His Thr Pro Ala Arg Gln Arg Thr Gln Arg Ala Asp Thr Gln
 35 40 45

Pro Ser Arg Cys Arg Leu Pro Ser Arg Arg Thr Pro Thr Thr Ser Ser
 50 55 60

Asp Arg Thr Ile Asn Leu Leu Glu Val Leu Pro Trp Pro Thr Glu Trp
 65 70 75 80

Ile Phe Asn Pro Tyr Arg Leu Pro Ala Leu Phe Glu Leu Tyr Pro Glu
 85 90 95

Phe Leu Leu Val Phe Lys Glu Ala Phe His Asp Ile Ser His Cys Leu
 100 105 110

Lys Ala Gln Met Glu Lys Ile Gly Leu Pro Ile Ile Leu His Leu Phe
 115 120 125

Ala Leu Ser Thr Leu Tyr Phe Tyr Lys Phe Phe Leu Pro Thr Ile Leu
 130 135 140

Ser Leu Ser Phe Phe Ile Leu Leu Val Leu Leu Leu Leu Phe Ile
 145 150 155 160

Ile Val Phe Ile Leu Ile Phe Phe
 165

<210> 47
 <211> 20
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20

<210> 48
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 <213> Artificial Sequence

<220>
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<400> 48
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 <211> 181
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 <213> Homo sapiens

<400> 50

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 20 25 30

Thr Leu Cys Phe Leu Met Thr Ser Leu Gly Gly Gln Phe Ser Ala Arg
 35 40 45

Arg Leu Gly Asp Ser Pro Phe Thr Ile Arg Thr Glu Val Met Gly Gly
 50 55 60

Pro Glu Ser Arg Gly Val Leu Arg Lys Met Ser Asp Leu Leu Glu Leu
65 70 75 80

Met Val Lys Arg Met Asp Ala Leu Ala Arg Leu Glu Asn Ser Ser Glu
85 90 95

Leu His Arg Ala Gly Gly Asp Leu His Phe Pro Ala Asp Arg Met Pro
100 105 110

Pro Gly Ala Gly Leu Met Glu Arg Ile Gln Ala Ile Ala Gln Asn Val
115 120 125

Ser Asp Ile Ala Val Lys Val Asp Gln Ile Leu Arg His Ser Leu Leu
130 135 140

Leu His Ser Lys Val Ser Glu Gly Arg Arg Asp Gln Cys Glu Ala Pro
145 150 155 160

Ser Asp Pro Lys Phe Pro Asp Cys Ser Gly Lys Val Ala Val Asp Ala
165 170 175

Cys Pro Leu Asp Leu
180

<210> 51
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<223> Oligonucleotide

<400> 51
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21

<210> 52
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<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide

<400> 52
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<210> 53
<211> 396
<212> DNA
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<400> 53

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<210> 54
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<213> Homo sapiens

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<400> 54

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Met Met Leu Thr Thr Ala Ala Leu Met Leu Phe Phe Leu His Leu Gly
1              5              10              15

```

```

Ile Phe Ile Arg Asp Val His Asn Phe Cys Ile Thr Tyr His Tyr Asp
      20              25              30

```

```

His Met Ser Phe His Tyr Thr Val Val Leu Met Phe Ser Gln Val Ile
      35              40              45

```

```

Ser Ile Cys Trp Ala Ala Met Gly Ser Leu Tyr Ala Glu Met Thr Glu
      50              55              60

```

```

Asn Asn Ala Gln Arg Ser His Val Leu Gln Pro Pro Val Leu Gly Val
65              70              75              80

```

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Ser Gly His Arg Val Pro Gly Gly Ala Pro Leu Arg Pro Gly Glu Ser
      85              90              95

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Glu Gln Gly

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<210> 55
<211> 22
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<220>
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<400> 55
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<210> 56
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 56
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<210> 57
 <211> 539
 <212> DNA
 <213> Homo sapiens

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<210> 58
 <211> 133
 <212> PRT
 <213> Homo sapiens

<400> 58

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Arg Phe Phe Lys Pro Val Trp Ser Lys Ala Phe Leu Leu Gly Glu Ala
 20 25 30

Ala Trp Phe Gln Val His Arg Met Leu Met Phe Thr Thr Thr Val Leu
 35 40 45

Thr Cys Ile Ala Phe Val Met Pro Phe Ile Tyr Arg Gly Gly Trp Ser
 50 55 60

Arg His Ala Gly Tyr His Pro Tyr Leu Gly Cys Ile Val Met Thr Leu
 65 70 75 80

Ala Val Leu Gln Pro Leu Leu Ala Val Phe Arg Pro Pro Leu His Asp
 85 90 95

Pro Arg Arg Gln Met Phe Asn Trp Thr His Trp Ser Met Gly Thr Ala
 100 105 110

Ala Arg Ile Ile Ala Asp Leu Lys Gln Ser Gly Lys Cys Gly Cys Ile
 115 120 125

Ser Phe Lys Asp Trp
 130

<210> 59
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 59
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<210> 60
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 60
 catcactata cagccgaggt 20

<210> 61
 <211> 3317
 <212> DNA
 <213> Homo sapiens

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<210> 62
<211> 129
<212> PRT
<213> Homo sapiens

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<400> 62
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Met Leu Leu Lys Val Arg Arg Ala Ser Leu Lys Pro Pro Ala Thr Pro
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His Gln Gly Ala Phe Arg Ala Gly Asn Val Ile Gly Gln Leu Ile Tyr
          20          25          30

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```

Leu Leu Thr Trp Ser Leu Phe Thr Ala Trp Leu Arg Pro Pro Thr Leu
          35          40          45

```

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Leu Gln Gly Pro Arg Thr Ser Pro Gln Gly Ser Pro Pro Arg Ser Pro
          50          55          60

```

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Trp Gly Asp Cys Ala Glu Pro Ser Cys Leu Cys Glu Met Lys Ile Arg
65          70          75          80

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Arg Arg Arg His Glu Gly Pro Ala Trp Gly Gln Ser Gly Phe Leu Ala
 85 90 95

Gly Gly Leu His Leu Val Pro Ser Ser Leu Ser Leu Ala Ala Cys Gly
 100 105 110

Val Val Arg Met Lys Gly Leu Trp Gly Arg Gly Ala Gly Ile Arg Gly
 115 120 125

Arg

<210> 63
 <211> 20
 <212> DNA
 <213> Artificial Sequence

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 <223> Oligonucleotide

<400> 63
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<210> 64
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 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 64
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<210> 65
 <211> 3338
 <212> DNA
 <213> Homo sapiens

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<210> 66
<211> 122
<212> PRT
<213> Homo sapiens

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<400> 66

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1          5          10          15

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Gly Pro Arg Arg Gln Tyr Thr Thr Gln Arg Asn Ile Leu Ser Thr Phe
          20          25          30

```

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Ser Leu Phe His Phe Ile Val Phe Ser Pro Ser Phe Leu Ser Phe Ser
          35          40          45

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Leu Leu Leu Ser Phe Ser Ser Leu Leu Phe Pro Leu Val Phe Asn Phe
          50          55          60

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```

Asn Phe Asn Phe Trp Pro Ser Tyr Thr Ser Ile Cys Leu Ser Arg Lys
65          70          75          80

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Leu Asn Ser Arg Gln Leu Ile Ile His Leu Ile Ser Ser Ala Lys Gln
85 90 95

Met Pro Ser Met Val Ser Phe Val Ile Arg Leu Leu Trp Asp Gln Asn
100 105 110

Val Ser Tyr Ser Ser Gly Lys Asn Glu Thr
115 120

<210> 67
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<220>
<223> Oligonucleotide

<400> 67
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<210> 68
<211> 17
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<210> 69
<211> 1119
<212> DNA
<213> Homo sapiens

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<213> Homo sapiens

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Arg Ala Thr Gly Ile Thr Gly Asn Phe Ala Asn Ile Gly Gly Ala Leu
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Ala Ser Leu Met Met Ile Leu Ser Ile Tyr Ser Arg Pro Leu Pro Trp
          35           40           45

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Ile Ile Tyr Gly Val Phe Ala Ile Leu Ser Gly Leu Val Val Leu Leu
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Leu Pro Glu Thr Arg Asn Gln Pro Leu Leu Asp Ser Ile Gln Asp Val
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Leu

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<213> Artificial Sequence

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<223> Oligonucleotide

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<400> 71
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 <223> Oligonucleotide

<400> 72
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<211> 102

<212> PRT

<213> Homo sapiens

<400> 74

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20 25 30

Ile Ile Ile Ile Ile Ile Ile Phe Arg Trp Ser Leu Ala Leu Ser Leu
35 40 45

Arg Leu Glu Cys Ser Gly Ala Ile Ser Ala Arg Cys Lys Leu Arg Leu
50 55 60

Val Gly Ser Cys His Ser Arg Ala Ser Ala Ser Gln Val Ala Gly Thr
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Thr Gly Thr Arg His His Thr Trp Leu Met Phe Arg Ile Phe Ser Arg
85 90 95

Gly Gly Val Ser Ser Cys
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<210> 75

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21

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<212> DNA

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<210> 77

<211> 5868

<212> DNA

<213> Homo sapiens

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<210> 78
 <211> 802
 <212> PRT
 <213> Homo sapiens
 <400> 78

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Pro Glu Ser Glu Ser Val Leu Val Leu Thr Val Leu Met Pro Thr Glu
 35 40 45

Glu Ala Tyr Ala Leu Pro Leu Val Val Lys Val Val Asp Asn Trp Ala
 50 55 60

Phe Gly Gln Gln Thr Val Thr Gly Gln Ala Asn Ile Asp Phe Leu Gln
 65 70 75 80

Pro Tyr Phe Cys Asp Pro Trp Ala Gln Asp Tyr Met His Pro Lys Leu
 85 90 95

Pro Thr Leu Ser Glu Lys Lys His Gln Asp Phe Leu Gly Tyr Leu Tyr
 100 105 110

Arg Lys Phe Trp Phe Lys Ser Ser Lys Ala Glu Asp Glu Tyr Glu His
 115 120 125

Glu Val Asp Trp Trp Ser Lys Leu Phe Trp Ala Thr Asp Glu His Lys
 130 135 140

Ser Leu Lys Tyr Lys Tyr Lys Asp Tyr His Thr Leu Lys Val Tyr Glu
 145 150 155 160

Cys Glu Leu Glu Ala Val Pro Ala Phe Gln Gly Leu Gln Asp Phe Cys
 165 170 175

Gln Thr Phe Lys Leu Tyr Gln Glu Gln Pro Lys Leu Asp Ser Pro Val
 180 185 190

Val Gly Glu Phe Lys Gly Leu Phe Arg Ile Tyr Pro Phe Pro Glu Asn
 195 200 205

Pro Glu Ala Pro Lys Pro Pro Leu Gln Phe Leu Val Trp Pro Glu Arg
 210 215 220

Glu Asp Phe Pro Gln Pro Cys Leu Val Arg Val Tyr Met Val Arg Ala
 225 230 235 240

Ile Asn Leu Gln Pro Gln Asp Tyr Asn Gly Leu Cys Asp Pro Tyr Val
 245 250 255

Ile Leu Lys Leu Gly Lys Thr Glu Leu Gly Asn Arg Asp Met Tyr Gln
 260 265 270

Pro Asn Thr Leu Asp Pro Ile Phe Gly Met Met Phe Glu Leu Thr Cys
 275 280 285

Asn Ile Pro Leu Glu Lys Asp Leu Glu Ile Gln Leu Tyr Asp Phe Asp
 290 295 300

Leu Phe Ser Pro Asp Asp Lys Ile Gly Thr Thr Val Ile Asp Leu Glu
 305 310 315 320

Asn Arg Leu Leu Ser Gly Phe Gly Ala His Cys Gly Leu Ser Lys Ser
 325 330 335

Tyr Cys Gln Ser Gly Pro Phe Arg Trp Arg Asp Gln Met Pro Pro Ser
 340 345 350

Tyr Leu Leu Glu Arg Tyr Ala Lys Arg Lys Gly Leu Pro Pro Pro Leu
 355 360 365

Phe Ser Pro Glu Glu Asp Ala Val Phe Tyr Asn Gly Lys Lys Phe Lys
 370 375 380

Leu Gln Ser Phe Glu Pro Lys Thr Pro Thr Val His Gly Leu Gly Pro
 385 390 395 400

Lys Lys Glu Arg Leu Ala Leu Tyr Leu Leu His Thr Gln Gly Leu Val
 405 410 415

Pro Glu His Val Glu Thr Arg Thr Leu Tyr Ser His Ser Gln Pro Gly
 420 425 430

Ile Asp Gln Gly Lys Val Gln Met Trp Val Asp Ile Phe Pro Lys Lys

435

440

445

Leu Gly Pro Pro Gly Pro Gln Val Asn Ile Asn Pro Arg Lys Pro Lys
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Arg Tyr Glu Leu Arg Cys Ile Ile Trp Lys Thr Ala Asn Val Asp Leu
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Val Asp Asp Asn Leu Ser Arg Glu Lys Thr Ser Asp Ile Tyr Ile Lys
 485 490 495

Gly Trp Leu Tyr Gly Leu Glu Lys Asp Met Gln Lys Thr Asp Ile His
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Tyr His Ser Leu Thr Gly Glu Ala Asp Phe Asn Trp Arg Phe Ile Phe
 515 520 525

Thr Met Asp Tyr Leu Ala Ala Glu Arg Thr Cys Val Gln Ser Gln Lys
 530 535 540

Asp Tyr Ile Trp Ser Leu Asp Ala Thr Ser Met Lys Phe Pro Ala Arg
 545 550 555 560

Leu Ile Ile Gln Val Trp Asp Asn Asp Ile Phe Ser Pro Asp Asp Phe
 565 570 575

Leu Gly Val Leu Glu Leu Asp Leu Ser Asp Met Pro Leu Pro Ala Arg
 580 585 590

His Ala Lys Gln Cys Ser Ile Arg Met Met Asp Ala Asp Pro Lys Trp
 595 600 605

Pro Tyr Phe Ile Gln Tyr Lys His Phe Ser Leu Phe Lys Lys Lys Thr
 610 615 620

Val Thr Gly Trp Trp Pro Cys Gln Val Leu Asp Gly Gly Lys Trp Arg
 625 630 635 640

Leu Ser Gly Lys Val Lys Met Ser Leu Glu Ile Leu Ser Glu Lys Glu
 645 650 655

Ala Leu Ile Lys Pro Ala Gly Arg Gly Gln Ser Glu Pro Asn Gln Tyr
 660 665 670

Pro Thr Leu His Pro Pro Leu Arg Thr Asn Thr Ser Phe Thr Trp Leu
 675 680 685

Arg Ser Pro Val Gln Asn Phe Cys Tyr Ile Phe Trp Lys Arg Tyr Arg
 690 695 700

Phe Lys Leu Ile Ala Phe Met Val Ile Ser Ile Ile Ala Leu Met Leu
 705 710 715 720

Phe Asn Phe Ile Tyr Ser Ala Pro His Tyr Leu Ala Met Ser Trp Ile
 725 730 735

Lys Pro Gln Leu Gln Leu Tyr Pro Pro Ile Lys Ile Phe Asn Ile Ile
 740 745 750

Asn Ser Leu Asn Thr Ser Asn Ala Ser Ser Ser Ile Leu Pro Thr Gln
 755 760 765

Asp Pro Asn Leu Lys Pro Thr Ile Asp His Glu Trp Lys Leu His Pro
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Gly Pro Thr Asn His Leu Ser Asp Ile Phe Pro Glu Leu Pro Ala Pro
 785 790 795 800

Gly Asp

<210> 79
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<400> 79
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21

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<400> 80
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21

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<210> 82
<211> 684
<212> PRT
<213> Homo sapiens

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<400> 82
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```
Val Ala Ala Gly Ala Phe Ala Asp Leu Arg Ala Leu Arg Ala Leu His
20          25          30
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Leu Asp Ser Asn Arg Leu Ala Glu Val Arg Gly Asp Gln Leu Arg Gly
35          40          45
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Leu Gly Asn Leu Arg His Leu Ile Leu Gly Asn Asn Gln Ile Arg Arg
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Val Glu Ser Ala Ala Phe Asp Ala Phe Leu Ser Thr Val Glu Asp Leu
 65 70 75 80

Asp Leu Ser Tyr Asn Asn Leu Glu Ala Leu Pro Trp Glu Ala Val Gly
 85 90 95

Gln Met Val Asn Leu Asn Thr Leu Thr Leu Asp His Asn Leu Ile Asp
 100 105 110

His Ile Ala Glu Gly Thr Phe Val Gln Leu His Lys Leu Val Arg Leu
 115 120 125

Asp Met Thr Ser Asn Arg Leu His Lys Leu Pro Pro Asp Gly Leu Phe
 130 135 140

Leu Arg Ser Gln Gly Thr Gly Pro Lys Pro Pro Thr Pro Leu Thr Val
 145 150 155 160

Ser Phe Gly Gly Asn Pro Leu His Cys Asn Cys Glu Leu Leu Trp Leu
 165 170 175

Arg Arg Leu Thr Arg Glu Asp Asp Leu Glu Thr Cys Ala Thr Pro Glu
 180 185 190

His Leu Thr Asp Arg Tyr Phe Trp Ser Ile Pro Glu Glu Glu Phe Leu
 195 200 205

Cys Glu Pro Pro Leu Ile Thr Arg Gln Ala Gly Gly Arg Ala Leu Val
 210 215 220

Val Glu Gly Gln Ala Val Ser Leu Arg Cys Arg Ala Val Gly Asp Pro
 225 230 235 240

Glu Pro Val Val His Trp Val Ala Pro Asp Gly Arg Leu Leu Gly Asn
 245 250 255

Ser Ser Arg Thr Arg Val Arg Gly Asp Gly Thr Leu Asp Val Thr Ile
 260 265 270

Thr Thr Leu Arg Asp Ser Gly Thr Phe Thr Cys Ile Ala Ser Asn Ala
 275 280 285

Ala Gly Glu Ala Thr Ala Pro Val Glu Val Cys Val Val Pro Leu Pro

290

295

300

Leu Met Ala Pro Pro Pro Ala Ala Pro Pro Pro Leu Thr Glu Pro Gly
 305 310 315 320

Ser Ser Asp Ile Ala Thr Pro Gly Arg Pro Gly Ala Asn Asp Ser Ala
 325 330 335

Ala Glu Arg Arg Leu Val Ala Ala Glu Leu Thr Ser Asn Ser Val Leu
 340 345 350

Ile Arg Trp Pro Ala Gln Arg Pro Val Pro Gly Ile Arg Met Tyr Gln
 355 360 365

Val Gln Tyr Asn Ser Ser Val Asp Asp Ser Leu Val Tyr Arg Met Ile
 370 375 380

Pro Ser Thr Ser Gln Thr Phe Leu Val Asn Asp Leu Ala Ala Gly Arg
 385 390 395 400

Ala Tyr Asp Leu Cys Val Leu Ala Val Tyr Asp Asp Gly Ala Thr Ala
 405 410 415

Leu Pro Ala Thr Arg Val Val Gly Cys Val Gln Phe Thr Thr Ala Gly
 420 425 430

Asp Pro Ala Pro Cys Arg Pro Leu Arg Ala His Phe Leu Gly Gly Thr
 435 440 445

Met Ile Ile Ala Ile Gly Gly Val Ile Val Ala Ser Val Leu Val Phe
 450 455 460

Ile Val Leu Leu Met Ile Arg Tyr Lys Val Tyr Gly Asp Gly Asp Ser
 465 470 475 480

Arg Arg Val Lys Gly Ser Arg Ser Leu Pro Arg Val Ser His Val Cys
 485 490 495

Ser Gln Thr Asn Gly Ala Gly Thr Gly Ala Ala Gln Ala Pro Ala Leu
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Pro Ala Gln Asp His Tyr Glu Ala Leu Arg Glu Val Glu Ser Gln Ala
 515 520 525

Ala Pro Ala Val Ala Val Glu Ala Lys Ala Met Glu Ala Glu Thr Ala
 530 535 540

Ser Ala Glu Pro Glu Val Val Leu Gly Arg Ser Leu Gly Gly Ser Ala
 545 550 555 560

Thr Ser Leu Cys Leu Leu Pro Ser Glu Glu Thr Ser Gly Glu Glu Ser
 565 570 575

Arg Ala Ala Val Gly Pro Arg Arg Ser Arg Ser Gly Ala Leu Glu Pro
 580 585 590

Pro Thr Ser Ala Pro Pro Thr Leu Ala Leu Val Pro Gly Gly Ala Ala
 595 600 605

Ala Arg Pro Arg Pro Gln Gln Arg Tyr Ser Phe Asp Gly Asp Tyr Gly
 610 615 620

Ala Leu Phe Gln Ser His Ser Tyr Pro Arg Arg Ala Arg Arg Thr Lys
 625 630 635 640

Arg His Arg Ser Thr Pro His Leu Asp Gly Ala Gly Gly Gly Ala Ala
 645 650 655

Gly Glu Asp Gly Asp Leu Gly Leu Gly Ser Ala Arg Ala Cys Leu Ala
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<400> 83
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17

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<220>
 <223> Oligonucleotide

<400> 84
 cgcacaagtc gtaggca

17

<210> 85
 <211> 2206

<212> DNA

<213> Homo sapiens

<400> 85

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<213> Homo sapiens

<400> 86

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20 25 30

Leu Ala Ala Gly Trp Arg Val Pro Thr Pro Thr Glu Gly Gly Ser Ser
35 40 45

Ser Pro Ser Pro Leu Thr Gln Ile Ser Val Ser Leu Gly Ala Pro Ser
50 55 60

His Gln Lys Gln Tyr Gln Pro Ser Ser His Pro Ser Val His His His
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Asn His Cys Leu Ile His Glu Thr Ser Ala Asp Pro Pro
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<210> 88
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<400> 88
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<210> 89
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 <212> DNA
 <213> Homo sapiens

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 cgtacttctg gacttccttt aaattgagag aaaca 455

<210> 90
 <211> 61
 <212> PRT
 <213> Homo sapiens

<400> 90

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Gly Trp Cys Ser Ala Thr Ser Pro Gly Leu Asn Leu Phe Leu Pro Phe
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Ser Ser Ala Ile Pro Ser His Arg Gly Ser Ile Ser Lys Val Thr Leu
 35 40 45

Arg Ser Glu Val Thr Thr Ala Thr Pro Ser His Pro Cys
 50 55 60

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 <212> DNA
 <213> Artificial Sequence

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<223> Oligonucleotide

<400> 91

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20

<210> 92

<211> 21

<212> DNA

<213> Artificial Sequence

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<223> Oligonucleotide

<400> 92

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<212> DNA

<213> Homo sapiens

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agggtgagcc cctccccgga ggcgcctgtg gaatgtccag ggctctggtc cgctcctcgg 240

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gccgggggag gggcaggaaa gagggctata agggcagcgg cccaggcggg cgggatccag 360

gcggggccatg gcggatgtcc ccggggcaca gcgagcgggt cctggtgacg gccagagcc 420

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<210> 94
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 94

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Glu Pro Arg Asp Pro Leu Asp Cys Trp Ala Cys Ala Val Leu Val Thr
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Ala Gln Asn Leu Leu Val Ala Ala Phe Asn Leu Leu Leu Leu Val Leu
 35 40 45

Val Leu Gly Thr Ile Leu Leu Pro Ala Val Thr Met Leu Gly Phe Gly
 50 55 60

Phe Leu Cys His Ser Gln Phe Leu Arg Ser Gln Ala Pro Pro Cys Thr
 65 70 75 80

Ala His Leu Arg Asp Pro Gly Phe Thr Ala Leu Leu Val Thr Gly Phe
 85 90 95

Leu Leu Leu Val Pro Leu Leu Val Leu Ala Leu Ala Ser Tyr Arg Arg
 100 105 110

Leu Cys Leu Arg Leu Arg Leu Ala Asp Cys Leu Val Pro Tyr Ser Arg
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Ala Leu Tyr Arg Arg Arg Arg Ala Pro Gln Pro Arg Gln Ile Arg Ala
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<400> 95

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<210> 96
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<400> 96
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<210> 97
 <211> 1020
 <212> DNA
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<210> 98
 <211> 339
 <212> PRT
 <213> Homo sapiens

<400> 98

Met Glu Glu Glu Glu Glu Asp Asp Asp Tyr Glu Asn Ser Thr Pro Pro

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Tyr	Lys	Asp	Leu	Pro	Pro	Lys	Pro	Gly	Thr	Met	Glu	Glu	Glu	Glu	Glu				
			20					25					30						
Asp	Asp	Asp	Tyr	Glu	Asn	Ser	Thr	Pro	Pro	Tyr	Lys	Asp	Leu	Pro	Pro				
		35					40					45							
Lys	Pro	Gly	Thr	Met	Glu	Glu	Glu	Glu	Glu	Asp	Asp	Asp	Tyr	Glu	Asn				
	50					55					60								
Ser	Thr	Pro	Pro	Tyr	Lys	Asp	Leu	Pro	Pro	Lys	Pro	Gly	Ser	Ser	Ala				
65					70					75					80				
Pro	Pro	Arg	Pro	Pro	Arg	Ala	Ala	Lys	Glu	Thr	Glu	Lys	Pro	Pro	Leu				
				85					90						95				
Pro	Cys	Lys	Pro	Arg	Asn	Met	Thr	Gly	Leu	Asp	Leu	Ala	Ala	Val	Thr				
			100					105					110						
Cys	Pro	Pro	Pro	Gln	Leu	Ala	Val	Asn	Leu	Glu	Pro	Ser	Pro	Leu	Gln				
		115					120					125							
Pro	Ser	Leu	Ala	Ala	Thr	Pro	Val	Pro	Trp	Leu	Asn	Gln	Arg	Ser	Gly				
	130					135					140								
Gly	Pro	Gly	Cys	Cys	Gln	Lys	Arg	Trp	Met	Val	Tyr	Leu	Cys	Leu	Leu				
145					150					155					160				
Val	Val	Thr	Ser	Leu	Phe	Leu	Gly	Cys	Leu	Gly	Leu	Thr	Val	Thr	Leu				
				165					170					175					
Ile	Lys	Leu	Thr	Gly	Met	Ala	Gly	Leu	Ala	Gly	Leu	Lys	His	Asp	Ile				
			180					185					190						
Ala	Arg	Val	Arg	Ala	Asp	Thr	Asn	Gln	Ser	Leu	Val	Glu	Leu	Trp	Gly				
		195					200					205							
Leu	Leu	Asp	Cys	Arg	Arg	Ile	Thr	Cys	Pro	Glu	Gly	Trp	Leu	Pro	Phe				
	210					215					220								
Glu	Gly	Lys	Cys	Tyr	Tyr	Phe	Ser	Pro	Ser	Thr	Lys	Ser	Trp	Asp	Glu				
225					230					235					240				
Ala	Arg	Met	Phe	Cys	Gln	Glu	Asn	Tyr	Ser	His	Leu	Val	Ile	Ile	Asn				
				245					250					255					

Ser Phe Ala Glu His Asn Phe Val Ala Lys Ala His Gly Ser Pro Arg
 260 265 270

Val Tyr Trp Leu Gly Leu Asn Asp Arg Ala Gln Glu Gly Asp Trp Arg
 275 280 285

Trp Leu Asp Gly Ser Pro Val Thr Leu Arg Gln Pro Glu Glu Pro Asn
 290 295 300

Asn Ile His Asp Glu Asp Cys Ala Thr Met Asn Lys Gly Gly Thr Trp
 305 310 315 320

Asn Asp Leu Ser Cys Tyr Lys Thr Thr Tyr Trp Ile Cys Glu Arg Lys
 325 330 335

Cys Ser Cys

<210> 99
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 99
 atagctttgc tgagcacctt c

21

<210> 100
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 100
 aagagacact cagatatgga c

21

<210> 101
 <211> 1680
 <212> DNA
 <213> Homo sapiens

<400> 101
 atggccaatg tcaccttggt gacaggattt cttcttatgg ggttttctaa tatccagaag 60
 ctgcggattt tatatggtgt gctcttcta ctgatttacc tggcagccct aatgagtaac 120
 cttctcatca ttactctcat taccctggac gtaaagctcc aaacacccat gtacttcttc 180
 ctgaagaact tatecttttt ggatgtcttc ctggtgtctg ttccaatccc aaaattcatt 240

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gtcaacaacc taaccacaa caattccatt tccattctag gatgtgcctt ccagctactt 300
ttaatgactt ccttctcagc aggagagata ttatcctca ctgccatgtc ctatgaccgc 360
tatgtagcca tctgctgtcc cctgaactac gaggtaatca tgaatactgg agtctgtgtg 420
ttaatggcaa gtgtttcctg ggccattgga gggctctttg gtactgcgta cacagctggc 480
acattttcca tgcctttctg tggctccagt gtgattccac agtttttctg tgatgttcct 540
tcattactaa ggatttctg ttctgaaaca ctaatggtaa ttatgcagg tattggagtt 600
ggtgcatgtt taagcatttc ttgtttcatc tgtattgtga tctcttacat ttatatcttc 660
tccactgtac tgaagatccc taccactaaa ggactgtgtg attgggttaa agggctcagt 720
gcggggactc tgttttctgg tttcagtacc acaatggaca caggcaacaa aactctgccc 780
caggactttc tcttactggg ctttctggt tctcaaactc ttcagctctc tctctttatg 840
ctttttctgg tgatgtacat cctcacagtt agtggtaatg tggctatctt gatgttggtg 900
agcacctccc atcagttgca taccctcatg tacttcttcc tgagcaacct ctccttctg 960
gagatttggg ataccacagc agcagtgcc aaagcactgg ccactctact ggggagaagt 1020
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acagagtact tcctcctggc agccatggct tatgaccgct gtcttgccat ctgctatcct 1140
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atgtggtatg ggtccacagt tttccttcac gtccgcacct ctatcaaaga tgccttgat 1560
ctgatcaaag ctgtccacgt cctgaacact gtggtgactc cagttttaaa ccccttcac 1620
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<210> 102
<211> 559
<212> PRT
<213> Homo sapiens

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<400> 102
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Met Ala Asn Val Thr Leu Val Thr Gly Phe Leu Leu Met Gly Phe Ser
1           5           10          15

```

```

Asn Ile Gln Lys Leu Arg Ile Leu Tyr Gly Val Leu Phe Leu Leu Ile
20          25          30

```

Tyr Leu Ala Ala Leu Met Ser Asn Leu Leu Ile Ile Thr Leu Ile Thr
 35 40 45

Leu Asp Val Lys Leu Gln Thr Pro Met Tyr Phe Phe Leu Lys Asn Leu
 50 55 60

Ser Phe Leu Asp Val Phe Leu Val Ser Val Pro Ile Pro Lys Phe Ile
 65 70 75 80

Val Asn Asn Leu Thr His Asn Asn Ser Ile Ser Ile Leu Gly Cys Ala
 85 90 95

Phe Gln Leu Leu Leu Met Thr Ser Phe Ser Ala Gly Glu Ile Phe Ile
 100 105 110

Leu Thr Ala Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys Cys Pro Leu
 115 120 125

Asn Tyr Glu Val Ile Met Asn Thr Gly Val Cys Val Leu Met Ala Ser
 130 135 140

Val Ser Trp Ala Ile Gly Gly Leu Phe Gly Thr Ala Tyr Thr Ala Gly
 145 150 155 160

Thr Phe Ser Met Pro Phe Cys Gly Ser Ser Val Ile Pro Gln Phe Phe
 165 170 175

Cys Asp Val Pro Ser Leu Leu Arg Ile Ser Cys Ser Glu Thr Leu Met
 180 185 190

Val Ile Tyr Ala Gly Ile Gly Val Gly Ala Cys Leu Ser Ile Ser Cys
 195 200 205

Phe Ile Cys Ile Val Ile Ser Tyr Ile Tyr Ile Phe Ser Thr Val Leu
 210 215 220

Lys Ile Pro Thr Thr Lys Gly Leu Cys Asp Trp Val Lys Gly Leu Ser
 225 230 235 240

Ala Gly Thr Leu Phe Ser Gly Phe Ser Thr Thr Met Asp Thr Gly Asn
 245 250 255

Lys Thr Leu Pro Gln Asp Phe Leu Leu Leu Gly Phe Pro Gly Ser Gln
 260 265 270

Thr Leu Gln Leu Ser Leu Phe Met Leu Phe Leu Val Met Tyr Ile Leu

275

280

285

Thr Val Ser Gly Asn Val Ala Ile Leu Met Leu Val Ser Thr Ser His
 290 295 300

Gln Leu His Thr Pro Met Tyr Phe Phe Leu Ser Asn Leu Ser Phe Leu
 305 310 315 320

Glu Ile Trp Tyr Thr Thr Ala Ala Val Pro Lys Ala Leu Ala Ile Leu
 325 330 335

Leu Gly Arg Ser Gln Thr Ile Ser Phe Thr Ser Cys Leu Leu Gln Met
 340 345 350

Tyr Phe Val Phe Ser Leu Gly Cys Thr Glu Tyr Phe Leu Leu Ala Ala
 355 360 365

Met Ala Tyr Asp Arg Cys Leu Ala Ile Cys Tyr Pro Leu His Tyr Gly
 370 375 380

Ala Ile Met Ser Ser Leu Leu Ser Ala Gln Leu Ala Leu Gly Ser Trp
 385 390 395 400

Val Cys Gly Phe Val Ala Ile Ala Val Pro Thr Ala Leu Ile Ser Gly
 405 410 415

Leu Ser Phe Cys Gly Pro Arg Ala Ile Asn His Phe Phe Cys Asp Ile
 420 425 430

Ala Pro Trp Ile Ala Leu Ala Cys Thr Asn Thr Gln Ala Val Glu Leu
 435 440 445

Val Ala Phe Val Ile Ala Val Val Val Ile Leu Ser Ser Cys Leu Ile
 450 455 460

Thr Phe Val Ser Tyr Val Tyr Ile Ile Ser Thr Ile Leu Arg Ile Pro
 465 470 475 480

Ser Ala Ser Gly Arg Ser Lys Ala Phe Ser Thr Cys Ser Ser His Leu
 485 490 495

Thr Val Val Leu Ile Trp Tyr Gly Ser Thr Val Phe Leu His Val Arg
 500 505 510

Thr Ser Ile Lys Asp Ala Leu Asp Leu Ile Lys Ala Val His Val Leu
 515 520 525

Asn Thr Val Val Thr Pro Val Leu Asn Pro Phe Ile Tyr Thr Leu Arg
 530 535 540

Asn Lys Glu Val Arg Glu Thr Leu Leu Lys Lys Trp Lys Gly Lys
 545 550 555

<210> 103
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 103
 cattttcttgt ttcattctgta ttgtg 25

<210> 104
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 104
 tggtgcctgt gtccattgtg 20

<210> 105
 <211> 499
 <212> DNA
 <213> Homo sapiens

<400> 105
 acaccacat ggtcggcgtg caggatattt cgctggaccc tagaaaagcc accacgacct 60
 gtggggccatg atgctacccc aatggctgct gctgctgttc cttctcttct tctttctctt 120
 cctcctcacc agggggtcac tttctccaac aaaatacaac cttttggagc tcaaggagtc 180
 ttgcatccgg aaccaggact gcgagactgg ctgctgccaa cgtgctccag acaattgcga 240
 gtgcgactgc gcggagaagg ggtccgaggg cagtctgtgt caaacgcagg tggtcttttg 300
 ccaatataga gcgtgtccct gcctgcggaa cctgacttgt atatattcaa agaatgagaa 360
 atggcttagc atgcctatg gccgttgtca gaaaattgga aggcagaagt tggctaagaa 420
 aatgtttctt tagtgctccc tcttctttgc tgctcctcc tctccacct gctctcctcc 480
 ctaccagag ctctgtgtt 499

<210> 106
 <211> 121
 <212> PRT
 <213> Homo sapiens

<400> 106

Met Met Leu Pro Gln Trp Leu Leu Leu Leu Phe Leu Leu Phe Phe Phe
 1 5 10 15

Leu Phe Leu Leu Thr Arg Gly Ser Leu Ser Pro Thr Lys Tyr Asn Leu
 20 25 30

Leu Glu Leu Lys Glu Ser Cys Ile Arg Asn Gln Asp Cys Glu Thr Gly
 35 40 45

Cys Cys Gln Arg Ala Pro Asp Asn Cys Glu Ser His Cys Ala Glu Lys
 50 55 60

Gly Ser Glu Gly Ser Leu Cys Gln Thr Gln Val Phe Phe Gly Gln Tyr
 65 70 75 80

Arg Ala Cys Pro Cys Leu Arg Asn Leu Thr Cys Ile Tyr Ser Lys Asn
 85 90 95

Glu Lys Trp Leu Ser Ile Ala Tyr Gly Arg Cys Gln Lys Ile Gly Arg
 100 105 110

Gln Lys Leu Ala Lys Lys Met Phe Phe
 115 120

<210> 107

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide

<400> 107

tgtgtcaaac gcaggtg

17

<210> 108

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide

<400> 108

ggagggagca ctagaagaac

20

<210> 109

<211> 659

<212> DNA

<213> Homo sapiens

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<400> 109
agcaaattac accattaatg tcctcctggc gaatgaaaca agagaatagt atttatcaga      60
gaaagtctgg tgagttgaag tccaagaccc caggaaacaa ctagccctgc tgggctgccc      120
ctccttcgga gtgggactat atgacctcca tcaggccaat ccacgtcaca gaatggtcta      180
ggcattggat gagtgcctca atctgagcca atgaaggcca ttgctgagac attttactgg      240
ttgccaggct gcaggcatcc caggcttctt gctgccctca tgtctacaac ctgtcgtctg      300
gaacattcca ggagccactt ttatcacttg cagcaatctt cttcagttag ttccccagga      360
cttgatttca tcttacaatc tgattccatg tgtctcccat attttaagga ttctttatta      420
tttctggctt acagagaaca aacattatct tttgctttcc tggctctgttc tagattttca      480
aaaataactc tgtcacttct gttatatggt atcattgctt gtaattatct atttacttat      540
ctgtctctgg actggactct ttacagacag gcaataacta attatctgtc tgtctggcat      600
ttggtagtca ctcataaatc gtttattgca ttactaacta aataaaaaag ttgacctg      659

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<210> 110
<211> 144
<212> PRT
<213> Homo sapiens

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```

<400> 110

```

```

Met Lys Val Ile Ala Glu Thr Phe Tyr Trp Leu Pro Gly Cys Arg His
1           5           10           15

```

```

Pro Arg Leu Pro Ala Ala Leu Met Ser Thr Thr Cys Arg Leu Glu His
20           25           30

```

```

Ser Arg Ser His Phe Tyr His Leu Gln Gln Ser Ser Ser Val Ser Ser
35           40           45

```

```

Pro Gly Leu Asp Phe Ile Leu Gln Ser Asp Ser Met Cys Leu Pro Tyr
50           55           60

```

```

Phe Lys Asp Ser Leu Leu Phe Leu Ala Tyr Arg Glu Gln Thr Leu Phe
65           70           75           80

```

```

Phe Ala Phe Leu Val Cys Ser Arg Phe Ser Lys Ile Thr Leu Ser Leu
85           90           95

```

```

Leu Leu Tyr Gly Ile Ile Ala Cys Asn Tyr Leu Phe Thr Tyr Leu Ser
100          105          110

```

```

Leu Asp Trp Thr Leu Tyr Arg Gln Ala Ile Thr Asn Tyr Leu Ser Val
115          120          125

```

Trp His Leu Val Val Thr His Lys Ser Phe Ile Ala Leu Leu Thr Lys
 130 135 140

<210> 111
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 111
 atcctggcga atgaaacaag agaat 25

<210> 112
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 112
 gcaaccagta aaatgtctca gcaatg 26

<210> 113
 <211> 831
 <212> DNA
 <213> Homo sapiens

<400> 113
 atgcgaagaa agaacctcac agaggtaaca gagtttggtt tcttgggatt ctccagattc 60
 cacaaacatc acatcactct ctttgtgggt tttctcatcc tgtacacatt aactgtggct 120
 ggcaatgccca tcatcatgac catcatctgc attgaccgtc acctccacac tcccatgtac 180
 ttcttctctga gcatgctggc tagctcaaag acagtgtaca cactgttcat cattccacag 240
 atgctctcca gcttcgtaac ccagaccag ccaatctccc tagcagggtg taccacccaa 300
 acgttcttct ttgttacctt ggccatcaac aattgcttct tgctcacagt gatgggctat 360
 gaccactata tggccatctg caatcccttg agatacaggg tcattacgag caagaagggtg 420
 tgtgtccagc tgggtgtgtg agccttttagc attggcctgg ccatggcagc tgtccaggta 480
 acatccatat ttaccttacc tttttgtcac acggtgggtg gtcatttctt ctgtgacatc 540
 ctccctgtca tgaaactctc ctgtattaat accactatca atgagataat caattttgtt 600
 gtcagggttat ttgtcatcct ggccccatg ggtctgggtc tcatctccta tgtcctcatc 660
 atctccactg tcttcaagat tgcttcagct gaggggttga agaagacctt tgccacctgt 720
 gccttcacc tcaactgtgg cattgtccat tatggctgtg cttccattgc ctacctcatg 780
 cccaagtcag aaaactctat agaacaagac ctcttctctc cagtgccta a 831

<210> 114
 <211> 276
 <212> PRT
 <213> Homo sapiens

<400> 114

Met Arg Arg Lys Asn Leu Thr Glu Val Thr Glu Phe Val Phe Leu Gly
 1 5 10 15

Phe Ser Arg Phe His Lys His His Ile Thr Leu Phe Val Val Phe Leu
 20 25 30

Ile Leu Tyr Thr Leu Thr Val Ala Gly Asn Ala Ile Ile Met Thr Ile
 35 40 45

Ile Cys Ile Asp Arg His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60

Met Leu Ala Ser Ser Lys Thr Val Tyr Thr Leu Phe Ile Ile Pro Gln
 65 70 75 80

Met Leu Ser Ser Phe Val Thr Gln Thr Gln Pro Ile Ser Leu Ala Gly
 85 90 95

Cys Thr Thr Gln Thr Phe Phe Phe Val Thr Leu Ala Ile Asn Asn Cys
 100 105 110

Phe Leu Leu Thr Val Met Gly Tyr Asp His Tyr Met Ala Ile Cys Asn
 115 120 125

Pro Leu Arg Tyr Arg Val Ile Thr Ser Lys Lys Val Cys Val Gln Leu
 130 135 140

Val Cys Gly Ala Phe Ser Ile Gly Leu Ala Met Ala Ala Val Gln Val
 145 150 155 160

Thr Ser Ile Phe Thr Leu Pro Phe Cys His Thr Val Val Gly His Phe
 165 170 175

Phe Cys Asp Ile Leu Pro Val Met Lys Leu Ser Cys Ile Asn Thr Thr
 180 185 190

Ile Asn Glu Ile Ile Asn Phe Val Val Arg Leu Phe Val Ile Leu Val
 195 200 205

Pro Met Gly Leu Val Phe Ile Ser Tyr Val Leu Ile Ile Ser Thr Val
 210 215 220

Leu Lys Ile Ala Ser Ala Glu Gly Trp Lys Lys Thr Phe Ala Thr Cys
 225 230 235 240

Ala Phe His Leu Thr Val Val Ile Val His Tyr Gly Cys Ala Ser Ile
 245 250 255

Ala Tyr Leu Met Pro Lys Ser Glu Asn Ser Ile Glu Gln Asp Leu Leu
 260 265 270

Leu Ser Val Thr
 275

<210> 115
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 115
 cttcgtaacc cagaccca 18

<210> 116
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 116
 cttgctcgta atgaccct 18

<210> 117
 <211> 1233
 <212> DNA
 <213> Homo sapiens

<400> 117
 gaagcagcca ccaccatctt gggagctctg ggagcaagga cccctgtaac acattcatcc 60
 ttgaatgaca aaatgtcttg tccagcatgg tattataaca taaacatgaa gaggaagaga 120
 catgagagat acgcacagtg aagagaccaa gctgggacac agtacgaagg tggcatctgc 180
 acgccaagca gagggacctc agaagaaact gagccagcca gcaccccacc ttcgtctttg 240
 acctccagcc tccagaacta aggatagagc tcttcatctc tgtagaagaa gaccatcaaa 300
 aagatacatc aattcattag aatcaaaagg acatgagtta tcagaattct ttctcctgaa 360
 agaaagtgga gatcaaaggt aaaacttcta gagaatgaga tgaaggcaga tgaaagaagt 420
 taacaagaca ttacatgact tgataatatt gcatgtatgc aaaaacctta tgaaatcaac 480

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tgtgttctag cgaccacttg tttttctttt tgtcataata ctttttattc tcttgcaatg      540
atattgattc atctgcacct gacatcaact ctgcatttgt agaaggtgat aagaatacag      600
ggaaatggaa taagtggctt tgcctgcaat cccgcagcag cagaaatgtc catttcctct      660
ctcctgaata atactacatt ctccactggg ttccacaagt ttcgaggtaa aagcatgaac      720
atacacgaag tcaccatcac taccctcacc accaccacca ttatttccac catattcacc      780
cttttaatac gcaaacttcc tccaaggctt cctgaagtca ccagaaatg catttcccca      840
agagtgaatt gtgctaacat tgtatcctat ggaactctgg gaagctaccc agatcctcaa      900
ctcttgaggt cttgctgact gcatgttcca ggctccacat ttaagctcca gtgactgctg      960
atgactgcat gacctaacac atgtcctcaa tcctttcttg gcctcagttt cttcaccagt     1020
gaattctgaa tgctggaatt ggcaatatct caggttcttt ccaactggaa ataccatgc      1080
taataatttt agtaagtcaa tagccataga aacctactga caaatgagt attttaacag      1140
agacagttgt actttcttaa ttttagcag aagggaatgc atatgtataa tatctatggt     1200
gccttctatg tgtaaaaata aatacacaga cac                                  1233

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<210> 118
<211> 90
<212> PRT
<213> Homo sapiens

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<400> 118

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```

Met Ser Ile Ser Ser Leu Leu Asn Asn Thr Thr Phe Ser Thr Gly Phe
1              5              10              15

```

```

His Lys Phe Arg Gly Lys Ser Met Asn Ile His Glu Val Thr Ile Thr
          20              25              30

```

```

Thr Leu Thr Thr Thr Thr Ile Ile Ser Thr Ile Phe Thr Leu Leu Ile
          35              40              45

```

```

Arg Lys Leu Pro Pro Arg Leu Pro Glu Val Thr Gln Lys Cys Ile Ser
          50              55              60

```

```

Pro Arg Val Ser Cys Ala Asn Ile Val Ser Tyr Gly Thr Leu Gly Ser
65              70              75              80

```

```

Tyr Pro Asp Pro Gln Leu Leu Glu Ser Cys
          85              90

```

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<210> 119
<211> 19
<212> DNA
<213> Artificial Sequence

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<220>

<223> Oligonucleotide

<400> 119

caccacacct tcgtctttg

19

<210> 120

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide

<400> 120

gttttacctt tgatctccac tttc

24

<210> 121

<211> 4209

<212> DNA

<213> Homo sapiens

<400> 121

agttgcttga aagcaacgtg cctattcaca tggagaatct tccctttcct ttaaaattac 60

ttagtgacctc atcgctaaac gccccagct ccacaccatg ggtgttgat atcttctca 120

ccttggtgtt tgccctgggg ttcttcttcc tattactccc ctacttatct tacttccatt 180

gtgatgacct accctacca tcgcctggga agagaaagt tccagtaggg cggaggcgga 240

ggcccagagg caggatgaaa aaccacagtc tgagagctgg tagagagtgc ccgagaggcc 300

tggaggagac ttcggaacct ctttcacaac tgcagagcct cctggggcca caccttgaca 360

aaggtgactt tggtcagctc tccggtccag acccccagg tgaggtgggc gaaagagcac 420

ctgatggagc ctcccagtc tctcatgagc ctatggaaga tgctgctccc attctctccc 480

cgttagcttc cccggtacct caagccaagc atctcagga tctggcctcc accccatcac 540

caggcccaat gaccacctca gtctcctccc taagtgcctc ccagccacca gaaccttccc 600

ttcccctaga acacctctca cccgagccac ctgcactttt cctcaccaca ccacacaccc 660

ctgatectct ggctgctct ccgcctcctc caaaaggctt cactgctcct ccctgcggg 720

actccacact gataactcca tctcactgtg actcagtggc acttccactg ggcaccgtcc 780

ctcaaagctt gtctccacat gaggatttgg tggcttctgt ccagccatc tcaggccttg 840

gtggctcaaa cagtcatgtt tctgcctcct cccggtggca ggagactgcc agaacctcgt 900

gcgcctttta ctcacagtc cagcaagatc ctctttcccg ccaccacca gagacctgtc 960

agatggaagc tggtagcctg tttttgtca gctctgatgg ccagaatgtc gtggggatac 1020

aagtcacaga aacagccaag gtcaacattt gggaagaaaa agaaaatgtt ggatcattta 1080

caaatcaaat gacccagaa aagcacttaa attctttggg gaatttggct aaatcattgg 1140

atgctgagca	ggacaccaca	aacccaaaac	ccttctggaa	catgggagag	aactcgaaac	1200
agctgcccgg	acctcagaag	tgctcagatc	ctaggctctt	gcaggaaagt	ttttggaaga	1260
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<213> Homo sapiens

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Asn Ala Pro Ser Ser Thr Pro Trp Val Leu Asp Ile Phe Leu Thr Leu
          20          25          30

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Val Phe Ala Leu Gly Phe Phe Phe Leu Leu Leu Pro Tyr Leu Ser Tyr
          35          40          45

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Phe His Cys Asp Asp Pro Pro Ser Pro Ser Pro Gly Lys Arg Lys Cys
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Pro Val Gly Arg Arg Arg Arg Pro Arg Gly Arg Met Lys Asn His Ser
65 70 75 80

Leu Arg Ala Gly Arg Glu Cys Pro Arg Gly Leu Glu Glu Thr Ser Asp
85 90 95

Leu Leu Ser Gln Leu Gln Ser Leu Leu Gly Pro His Leu Asp Lys Gly
100 105 110

Asp Phe Gly Gln Leu Ser Gly Pro Asp Pro Pro Gly Glu Val Gly Glu
115 120 125

Arg Ala Pro Asp Gly Ala Ser Gln Ser Ser His Glu Pro Met Glu Asp
130 135 140

Ala Ala Pro Ile Leu Ser Pro Leu Ala Ser Pro Asp Pro Gln Ala Lys
145 150 155 160

His Pro Gln Asp Leu Ala Ser Thr Pro Ser Pro Gly Pro Met Thr Thr
165 170 175

Ser Val Ser Ser Leu Ser Ala Ser Gln Pro Pro Glu Pro Ser Leu Pro
180 185 190

Leu Glu His Pro Ser Pro Glu Pro Pro Ala Leu Phe Pro His Pro Pro
195 200 205

His Thr Pro Asp Pro Leu Ala Cys Ser Pro Pro Pro Pro Lys Gly Phe
210 215 220

Thr Ala Pro Pro Leu Arg Asp Ser Thr Leu Ile Thr Pro Ser His Cys
225 230 235 240

Asp Ser Val Ala Leu Pro Leu Gly Thr Val Pro Gln Ser Leu Ser Pro
245 250 255

His Glu Asp Leu Val Ala Ser Val Pro Ala Ile Ser Gly Leu Gly Gly
260 265 270

Ser Asn Ser His Val Ser Ala Ser Ser Arg Trp Gln Glu Thr Ala Arg
275 280 285

Thr Ser Cys Ala Phe Asn Ser Ser Val Gln Gln Asp Pro Leu Ser Arg
290 295 300

His Pro Pro Glu Thr Cys Gln Met Glu Ala Gly Ser Leu Phe Leu Leu
305 310 315 320

Ser Ser Asp Gly Gln Asn Val Val Gly Ile Gln Val Thr Glu Thr Ala
325 330 335

Lys Val Asn Ile Trp Glu Glu Lys Glu Asn Val Gly Ser Phe Thr Asn
340 345 350

Gln Met Thr Pro Glu Lys His Leu Asn Ser Leu Gly Asn Leu Ala Lys
355 360 365

Ser Leu Asp Ala Glu Gln Asp Thr Thr Asn Pro Lys Pro Phe Trp Asn
370 375 380

Met Gly Glu Asn Ser Lys Gln Leu Pro Gly Pro Gln Lys Cys Ser Asp
385 390 395 400

Pro Arg Leu Leu Gln Glu Ser Phe Trp Lys Asn Tyr Ser Gln Leu Phe
405 410 415

Trp Gly Leu Pro Ser Leu His Ser Glu Ser Leu Val Ala Asn Ala Trp
420 425 430

Val Thr Asp Arg Ser Tyr Thr Leu Gln Ser Pro Pro Phe Leu Phe Asn
435 440 445

Glu Met Ser Asn Val Cys Pro Ile Gln Arg Glu Thr Thr Met Ser Pro
450 455 460

Leu Leu Phe Gln Ala Gln Pro Leu Ser His Arg Gln Pro Phe Ile Ser
465 470 475 480

Ser Thr Pro Gln Phe Leu Pro Thr Pro Met Ala Gln Ala Glu Ala Gln
485 490 495

Ala His Leu Gln Ser Ser Phe Pro Val Leu Ser Pro Ala Phe Pro Ser
500 505 510

Leu Ile Lys Asn Thr Gly Val Ala Cys Pro Ala Ser Gln Asn Lys Val
515 520 525

Gln Ala Leu Ser Leu Pro Glu Thr Gln His Pro Glu Trp Pro Leu Leu
530 535 540

Arg Lys Gln Leu Glu Gly Arg Leu Ala Leu Pro Ser Arg Val Gln Lys

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Arg	Gln	Leu	Glu	Gln	His	Ile	Lys	Lys	Trp	Ile	Ile	Gln	His	Trp	Gly
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Asn	Leu	Gly	Arg	Ile	Gln	Glu	Ser	Leu	Asp	Leu	Met	Gln	Leu	Arg	Asp
	610					615					620				
Glu	Ser	Pro	Gly	Thr	Ser	Gln	Ala	Lys	Gly	Lys	Pro	Ser	Pro	Trp	Gln
625					630					635					640
Ser	Ser	Thr	Ser	Thr	Gly	Glu	Ser	Ser	Lys	Glu	Ala	Gln	Lys	Val	Lys
				645					650					655	
Phe	Gln	Leu	Glu	Arg	Asp	Leu	Cys	Pro	His	Leu	Gly	Gln	Ile	Leu	Gly
			660					665					670		
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	690					695					700				
Leu	Arg	Ser	Asp	Ser	Gly	Ser	Asp	Leu	Leu	Arg	Cys	Thr	Glu	Arg	Thr
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His	Ile	Glu	Asn	Ile	Leu	Lys	Ala	His	Met	Gly	Arg	Asn	Leu	Gly	Gln
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Thr	Asn	Glu	Gly	Leu	Ile	Pro	Val	Arg	Val	Arg	Arg	Ser	Trp	Leu	Ala
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	770					775					780				
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785					790					795					800

Val Arg Phe Trp Ala Lys His Arg Trp Gly Leu Pro Leu Arg Val Leu
805 810 815

Lys Pro Ile Gln Cys Phe Lys Leu Glu Lys Val Ser Ser Leu Ser Leu
820 825 830

Thr Gln Leu Ala Gly Pro Ser Ser Ala Thr Cys Glu Ser Gly Ala Gly
835 840 845

Ser Glu Val Glu Val Asp Met Phe Leu Arg Lys Pro Pro Met Ala Ser
850 855 860

Leu Arg Lys Gln Val Leu Thr Lys Ala Ser Asp His Met Pro Glu Ser
865 870 875 880

Leu Leu Ala Ser Ser Pro Ala Trp Lys Gln Phe Gln Arg Ala Pro Arg
885 890 895

Gly Ile Pro Ser Trp Asn Asp His Gly Pro Leu Lys Pro Pro Pro Ala
900 905 910

Gly Gln Glu Gly Arg Trp Pro Ser Lys Pro Leu Thr Tyr Ser Leu Thr
915 920 925

Gly Ser Thr Gln Gln Ser Arg Ser Leu Gly Ala Gln Ser Ser Lys Ala
930 935 940

Gly Glu Thr Arg Glu Ala Val Pro Gln Cys Arg Val Pro Leu Glu Thr
945 950 955 960

Cys Met Leu Ala Asn Leu Gln Ala Thr Ser Glu Asp Val His Gly Phe
965 970 975

Glu Ala Pro Gly Thr Ser Lys Ser Ser Leu His Pro Arg Val Ser Val
980 985 990

Ser Gln Asp Pro Arg Lys Leu Cys Leu Met Glu Glu Val Val Ser Glu
995 1000 1005

Phe Glu Pro Gly Met Ala Thr Lys Ser Glu Thr Gln Pro Gln Val
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Cys Ala Ala Val Val Leu Leu Pro Asp Gly Gln Ala Ser Val Val
1025 1030 1035

Pro His Ala Ser Glu Asn Leu Val Ser Gln Val Pro Gln Gly His
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Leu	Gln	Ser	Met	Pro	Thr	Gly	Asn	Met	Arg	Ala	Ser	Gln	Glu	Leu
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1085						1090					1095			
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Leu	Glu	Lys	His	Glu	Glu	Arg	Leu	Glu	Gly	Leu	Arg	Thr	Pro	Gln
1115						1120					1125			
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1130						1135					1140			
Val	Gln	Leu	Leu	Pro	Ser	Lys	Lys	Gln	Pro	Pro	Ser	Val	Ser	His
1145						1150					1155			
Phe	Gly	Glu	Asn	Ile	Lys	Gln	Phe	Phe	Gln	Trp	Ile	Phe	Ser	Lys
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Lys	Lys	Ser	Lys	Pro	Ala	Pro	Val	Thr	Ala	Glu	Ser	Gln	Lys	Thr
1175						1180					1185			
Val	Lys	Asn	Arg	Ser	Cys	Val	Tyr	Ser	Ser	Ser	Ala	Glu	Ala	Gln
1190						1195					1200			
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1205						1210					1215			
Leu	Cys	His	Ala	His	His	Ala	Ser	Lys	Val	Asn	Gln	His	Lys	Gln
1220						1225					1230			
Lys	Phe	Gln	Ala	Pro	Val	Cys	Gly	Phe	Pro	Cys	Asn	His	Arg	His
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Leu	Phe	Tyr	Ser	Glu	His	Gly	Arg	Ile	Leu	Ser	Tyr	Ala	Ala	Ser
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Ser	Gln	Gln	Ala	Thr	Leu	Lys	Ser	Gln	Gly	Cys	Pro	Asn	Arg	Asp
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Arg	Gln	Ile	Arg	Asn	Gln	Gln	Pro	Leu	Lys	Ser	Val	Arg	Cys	Asn

1280

1285

1290

Asn Glu Gln Trp Gly Leu Arg His Pro Gln Ile Leu His Pro Lys
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Lys Ala Val Ser Pro Val Ser Pro Pro Gln His Trp Pro Lys Thr
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Ser Gly Ala Ser Ser His His His His Cys Pro Arg His Cys Leu
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Leu Trp Glu Gly Ile
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 <213> Artificial Sequence

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24

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18

<210> 125
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<400> 126

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Arg Arg Arg Glu Ile Ala His Val His Ala Glu Lys Gly Gln Ser Asp
35 40 45

Lys Met Asn Thr Asp Asp Leu Glu Asn Ser Ser Val Thr Ser Lys Gln
50 55 60

Thr Pro Gln Leu Val Val Ser Glu Asp Pro Met Met Met Ser Ala Val
65 70 75 80

Pro Ser Ala Thr Ser Leu Asn Lys Ala Phe Ser Ile Asn Lys Glu Thr
85 90 95

Gln Pro Gly Gln Ala Gly Leu Met Gln Thr Glu Arg Pro Gly Val Ser
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Thr Pro Thr Glu Ser Gly Val Pro Ser Ala Glu Glu Val Phe Gly Ser
 115 120 125

Ser Gln Pro Glu Arg Ile Ser Pro Glu Ser Gly Leu Ala Lys Ala Met
 130 135 140

Leu Thr Ile Ala Ile Thr Ala Thr Pro Ser Leu Thr Val Asp Glu Lys
 145 150 155 160

Glu Glu Leu Leu Thr Ser Thr Asn Phe Gln Pro Ile Val Glu Glu Ile
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Thr Glu Thr Thr Lys Gly Phe Leu Lys Tyr Met Asp Asn Gln Ser Phe
 180 185 190

Ala Thr Glu Ser Gln Glu Gly Val Gly Leu Gly His Ser Pro Ser Ser
 195 200 205

Tyr Val Asn Thr Lys Glu Met Leu Thr Thr Asn Pro Lys Thr Glu Lys
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Phe Glu Ala Asp Thr Asp His Arg Thr Thr Ser Phe Pro Gly Ala Glu
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Ser Thr Ala Gly Ser Glu Pro Gly Ser Leu Thr Pro Asp Lys Glu Lys
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Pro Ser Gln Met Thr Ala Asp Asn Thr Gln Ala Ala Ala Thr Lys Gln
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Pro Leu Glu Thr Ser Glu Tyr Thr Leu Ser Val Glu Pro Glu Thr Asp
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Ser Leu Leu Gly Ala Pro Glu Val Thr Val Ser Val Ser Thr Ala Val
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Pro Ala Ala Ser Ala Leu Ser Asp Glu Trp Asp Asp Thr Lys Leu Glu
 305 310 315 320

Ser Val Ser Arg Ile Arg Thr Pro Lys Leu Gly Asp Asn Glu Glu Thr
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Gln Val Arg Thr Glu Met Ser Gln Thr Ala Gln Val Ser His Glu Gly
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Met Glu Gly Gly Gln Pro Trp Thr Glu Ala Ala Gln Val Ala Leu Gly
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Leu Pro Glu Gly Glu Thr His Thr Gly Thr Ala Leu Leu Ile Ala His
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Ser Thr Gly Asp Phe Thr Glu Ser Thr Lys Glu Asn Asp Ala Leu Phe
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Phe Leu Glu Thr Thr Val Ser Val Ser Val Tyr Glu Ser Glu Ala Asp
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Gln Leu Leu Gly Asn Thr Met Lys Asp Ile Ile Thr Gln Glu Met Thr
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Thr Ala Val Gln Glu Pro Asp Ala Thr Leu Ser Met Val Thr Gln Glu
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Gln Val Ala Thr Leu Glu Leu Ile Arg Asp Ser Gly Lys Thr Glu Glu
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Glu Lys Glu Asp Pro Ser Pro Val Ser Asp Val Pro Gly Val Thr Gln
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Leu Ser Arg Arg Trp Glu Pro Leu Ala Thr Thr Ile Ser Thr Thr Val
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Val Pro Leu Ser Phe Glu Val Thr Pro Thr Val Glu Glu Gln Met Asp
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Thr Val Thr Gly Pro Asn Glu Glu Phe Thr Pro Val Leu Gly Ser Pro
 545 550 555 560

Val Thr Pro Pro Gly Ile Met Val Gly Glu Pro Ser Ile Ser Pro Ala
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Leu Pro Ala Leu Glu Ala Ser Ser Glu Arg Arg Thr Val Val Pro Ser
 580 585 590

Ile Thr Arg Val Asn Thr Ala Ala Ser Tyr Gly Leu Asp Gln Leu Glu

595

600

605

Ser Glu Glu Gly Gln Glu Asp Glu Asp Glu Glu Asp Glu Glu Asp Glu
 610 615 620

Asp Glu Glu Glu Glu Asp Glu Glu Glu Asp Glu Glu Asp Lys Asp Ala
 625 630 635 640

Asp Ser Leu Asp Glu Gly Leu Asp Gly Asp Thr Glu Leu Pro Gly Phe
 645 650 655

Thr Leu Pro Gly Ile Thr Ser Gln Glu Pro Gly Leu Glu Glu Gly Asn
 660 665 670

Met Asp Leu Leu Glu Gly Ala Thr Tyr Gln Val Pro Asp Ala Leu Glu
 675 680 685

Trp Glu Gln Gln Asn Gln Gly Leu Val Arg Ser Trp Met Glu Lys Leu
 690 695 700

Lys Asp Lys Ala Gly Tyr Met Ser Gly Met Leu Val Pro Val Gly Val
 705 710 715 720

Gly Ile Ala Gly Ala Leu Phe Ile Leu Gly Ala Leu Tyr Ser Ile Lys
 725 730 735

Val Met Asn Arg Arg Arg Arg Asn Gly Phe Lys Arg His Lys Arg Lys
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Gln Arg Glu Phe Asn Ser Met Gln Asp Arg Val Met Leu Leu Ala Asp
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Ser Ser Glu Asp Glu Phe
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18

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18

<210> 129

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<212> DNA

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tcttgtttcc tgccctcact gcattccctc acctctacct ttttatcctt ccaccctagg	180
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cagtggctcc ccatgaccag agtccaagac gaagacctaa aaaagggtt atcaagaaaa	540
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tggatgatca caaattaacc ttggaagagc tgagcaccaa gtactccgtg gacctgacaa	660
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gacagcagtg gacctatgag caacgaaaag ttgtggagtt cacatgccaa acggcctttt	3240
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 ggccagagat tataagtttg acacaac 3627

<210> 130
 <211> 1029
 <212> PRT
 <213> Homo sapiens

<400> 130

Met Gly Leu Trp Gly Lys Lys Gly Thr Val Ala Pro His Asp Gln Ser
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Pro Arg Arg Arg Pro Lys Lys Gly Leu Ile Lys Lys Lys Met Val Lys
 20 25 30

Arg Glu Lys Gln Lys Arg Asn Met Glu Glu Leu Lys Lys Glu Val Val
 35 40 45

Met Asp Asp His Lys Leu Thr Leu Glu Glu Leu Ser Thr Lys Tyr Ser
 50 55 60

Val Asp Leu Thr Lys Gly His Ser His Gln Arg Ala Lys Glu Ile Leu
 65 70 75 80

Thr Arg Gly Gly Pro Asn Thr Val Thr Pro Pro Pro Thr Thr Pro Glu
 85 90 95

Trp Val Lys Phe Cys Lys Gln Leu Phe Gly Gly Phe Ser Leu Leu Leu
 100 105 110

Trp Thr Gly Ala Ile Leu Cys Phe Val Ala Tyr Ser Ile Gln Ile Tyr
 115 120 125

Phe Asn Glu Glu Pro Thr Lys Asp Asn Leu Tyr Leu Ser Ile Val Leu
 130 135 140

Ser Val Val Val Ile Val Thr Gly Cys Phe Ser Tyr Tyr Gln Glu Ala
 145 150 155 160

Lys Ser Ser Lys Ile Met Glu Ser Phe Lys Asn Met Val Pro Gln Gln
 165 170 175

Ala Leu Val Ile Arg Gly Gly Glu Lys Met Gln Ile Asn Val Gln Glu
 180 185 190

Val Val Leu Gly Asp Leu Val Glu Ile Lys Gly Gly Asp Arg Val Pro
 195 200 205

Ala Asp Leu Arg Leu Ile Ser Ala Gln Gly Cys Lys Val Asp Asn Ser
 210 215 220

Ser Leu Thr Gly Glu Ser Glu Pro Gln Ser Arg Ser Pro Asp Phe Thr
 225 230 235 240

His Glu Asn Pro Leu Glu Thr Arg Asn Ile Cys Phe Phe Ser Thr Asn
 245 250 255

Cys Val Glu Gly Thr Ala Arg Gly Ile Val Ile Ala Thr Gly Asp Ser
 260 265 270

Thr Val Met Gly Arg Ile Ala Ser Leu Thr Ser Gly Leu Ala Val Gly
 275 280 285

Gln Thr Pro Ile Ala Ala Glu Ile Glu His Phe Ile His Leu Ile Thr
 290 295 300

Val Val Ala Val Phe Leu Gly Val Thr Phe Phe Ala Leu Ser Leu Leu
 305 310 315 320

Leu Gly Tyr Gly Trp Leu Glu Ala Ile Ile Phe Leu Ile Gly Ile Ile
 325 330 335

Val Ala Asn Val Pro Glu Gly Leu Leu Ala Thr Val Thr Val Cys Leu
 340 345 350

Thr Leu Thr Ala Lys Arg Met Ala Arg Lys Asn Cys Leu Val Lys Asn
 355 360 365

Leu Glu Ala Val Glu Thr Leu Gly Ser Thr Ser Thr Ile Cys Ser Asp
 370 375 380

Lys Thr Gly Thr Leu Thr Gln Asn Arg Met Thr Val Ala His Met Trp
 385 390 395 400

Phe Asp Met Thr Val Tyr Glu Ala Asp Thr Thr Glu Glu Gln Thr Gly
 405 410 415

Lys Thr Phe Thr Lys Ser Ser Asp Thr Trp Phe Met Leu Ala Arg Ile

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Ala	Gly	Leu	Cys	Asn	Arg	Ala	Asp	Phe	Lys	Ala	Asn	Gln	Glu	Ile	Leu
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Pro	Ile	Ala	Lys	Arg	Ala	Thr	Thr	Gly	Asp	Ala	Ser	Glu	Ser	Ala	Leu
	450					455					460				
Leu	Lys	Phe	Ile	Glu	Gln	Ser	Tyr	Ser	Ser	Val	Ala	Glu	Met	Arg	Glu
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Lys	Asn	Pro	Lys	Val	Ala	Glu	Ile	Pro	Phe	Asn	Ser	Thr	Asn	Lys	Tyr
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Gln	Met	Ser	Ile	His	Leu	Arg	Glu	Asp	Ser	Ser	Gln	Thr	His	Val	Leu
			500					505					510		
Met	Met	Lys	Gly	Ala	Pro	Glu	Arg	Ile	Leu	Glu	Phe	Cys	Ser	Thr	Phe
		515					520					525			
Leu	Leu	Asn	Gly	Gln	Glu	Tyr	Ser	Met	Asn	Asp	Glu	Met	Lys	Glu	Ala
	530					535					540				
Phe	Gln	Asn	Ala	Tyr	Leu	Glu	Leu	Gly	Gly	Leu	Gly	Glu	Arg	Val	Leu
545					550					555					560
Gly	Phe	Cys	Phe	Leu	Asn	Leu	Pro	Ser	Ser	Phe	Ser	Lys	Gly	Phe	Pro
				565					570					575	
Phe	Asn	Thr	Asp	Glu	Ile	Asn	Phe	Pro	Met	Asp	Asn	Leu	Cys	Phe	Val
			580					585					590		
Gly	Leu	Ile	Ser	Met	Ile	Asp	Pro	Pro	Arg	Ala	Ala	Val	Pro	Asp	Ala
		595					600					605			
Val	Ser	Lys	Cys	Arg	Ser	Ala	Gly	Ile	Lys	Val	Ile	Met	Val	Thr	Gly
	610					615					620				
Asp	His	Pro	Ile	Thr	Ala	Lys	Ala	Ile	Ala	Lys	Gly	Val	Gly	Ile	Ile
625					630					635					640
Ser	Glu	Gly	Thr	Glu	Thr	Ala	Glu	Glu	Val	Ala	Ala	Arg	Leu	Lys	Ile
				645					650					655	
Pro	Ile	Ser	Lys	Val	Asp	Ala	Ser	Ala	Ala	Lys	Ala	Ile	Val	Val	His
			660					665					670		

Gly	Ala	Glu	Leu	Lys	Asp	Ile	Gln	Ser	Lys	Gln	Leu	Asp	Gln	Ile	Leu	
	675						680					685				
Gln	Asn	His	Pro	Glu	Ile	Val	Phe	Ala	Arg	Thr	Ser	Pro	Gln	Gln	Lys	
	690					695					700					
Leu	Ile	Ile	Val	Glu	Gly	Cys	Gln	Arg	Leu	Gly	Ala	Val	Val	Ala	Val	
705					710					715					720	
Thr	Gly	Asp	Gly	Val	Asn	Asp	Ser	Pro	Ala	Leu	Lys	Lys	Ala	Asp	Ile	
				725					730					735		
Gly	Ile	Ala	Met	Gly	Ile	Ser	Gly	Ser	Asp	Val	Ser	Lys	Gln	Ala	Ala	
			740					745					750			
Asp	Met	Ile	Leu	Leu	Asp	Asp	Asn	Phe	Ala	Ser	Ile	Val	Thr	Gly	Val	
	755						760					765				
Glu	Glu	Gly	Arg	Leu	Ile	Phe	Asp	Asn	Leu	Lys	Lys	Ser	Ile	Met	Tyr	
	770					775					780					
Thr	Leu	Thr	Ser	Asn	Ile	Pro	Glu	Ile	Thr	Pro	Phe	Leu	Met	Phe	Ile	
785					790					795					800	
Ile	Leu	Gly	Ile	Pro	Leu	Pro	Leu	Gly	Thr	Ile	Thr	Ile	Leu	Cys	Ile	
				805					810					815		
Asp	Leu	Gly	Thr	Asp	Met	Val	Pro	Ala	Ile	Ser	Leu	Ala	Tyr	Glu	Ser	
			820					825					830			
Ala	Glu	Ser	Asp	Ile	Met	Lys	Arg	Leu	Pro	Arg	Asn	Pro	Lys	Thr	Asp	
		835					840					845				
Asn	Leu	Val	Asn	His	Arg	Leu	Ile	Gly	Met	Ala	Tyr	Gly	Gln	Ile	Gly	
	850					855					860					
Met	Ile	Gln	Ala	Leu	Ala	Gly	Phe	Phe	Thr	Tyr	Phe	Val	Ile	Leu	Ala	
865					870					875					880	
Glu	Asn	Gly	Phe	Arg	Pro	Val	Asp	Leu	Leu	Gly	Ile	Arg	Leu	His	Trp	
				885					890					895		
Glu	Asp	Lys	Tyr	Leu	Asn	Asp	Leu	Glu	Asp	Ser	Tyr	Gly	Gln	Gln	Trp	
		900						905					910			
Thr	Tyr	Glu	Gln	Arg	Lys	Val	Val	Glu	Phe	Thr	Cys	Gln	Thr	Ala	Phe	
	915						920					925				

Phe Val Thr Ile Val Val Val Gln Trp Ala Asp Leu Ile Ile Ser Lys
 930 935 940

Thr Arg Arg Asn Ser Leu Phe Gln Gln Gly Met Arg Asn Lys Val Leu
 945 950 955 960

Ile Phe Gly Ile Leu Glu Glu Thr Leu Leu Ala Ala Phe Leu Ser Tyr
 965 970 975

Thr Pro Gly Met Asp Val Ala Leu Arg Met Tyr Pro Leu Lys Ile Thr
 980 985 990

Trp Trp Leu Cys Ala Ile Pro Tyr Ser Ile Leu Ile Phe Val Tyr Asp
 995 1000 1005

Glu Ile Arg Lys Leu Leu Ile Arg Gln His Pro Asp Gly Trp Val
 1010 1015 1020

Glu Arg Glu Thr Tyr Tyr
 1025

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<210> 132
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<220>
 <223> Oligonucleotide

<400> 132
 aagtgagttg cggcgagt 18

<210> 133
 <211> 279
 <212> DNA
 <213> Homo sapiens

<400> 133
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cacgggatct catatattct ggctgtcatt gtcataataa gccactcttg gtcatatgga 120

aaagcattca gctgctccct gcctttgctc acagcgtgtg gtactctctt agaagctatt 180
 cctgtcctat ttaggcagtt attcctgctt cttgtgttgg acctgaagtc aacagggcca 240
 gcaatagaga agaaagatga tgtgaaggag agcaactga 279

<210> 134
 <211> 92
 <212> PRT
 <213> Homo sapiens

<400> 134

Met Tyr Val Lys Ile Ala Lys His Leu Asn Asp Val Tyr Ala Pro Gln
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Lys Val Leu Cys His Gly Ile Ser Tyr Ile Leu Ala Val Ile Val Ile
 20 25 30

Ile Ser His Ser Trp Ser Tyr Gly Lys Ala Phe Ser Cys Ser Leu Pro
 35 40 45

Leu Leu Thr Ala Cys Gly Thr Leu Leu Glu Ala Ile Pro Val Leu Phe
 50 55 60

Arg Gln Leu Phe Leu Leu Leu Val Leu Asp Leu Lys Ser Thr Gly Pro
 65 70 75 80

Ala Ile Glu Lys Lys Asp Asp Val Lys Glu Ser Asn
 85 90

<210> 135
 <211> 20
 <212> DNA
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<220>
 <223> Oligonucleotide

<400> 135
 tgctccctgc ctttgctcac 20

<210> 136
 <211> 24
 <212> DNA
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<220>
 <223> Oligonucleotide

<400> 136
 ggtacttggt ctcgaacgat gatc 24

<210> 137
 <211> 1569
 <212> DNA
 <213> Homo sapiens

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 atcaggaaga agaagcagca aaattctgac ccacagccca agaggggtcg gggcagcaga 180
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 acccagtga 1569

<210> 138

<211> 522
 <212> PRT
 <213> Homo sapiens

<400> 138

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Gln Cys His Ile Lys Gly Lys Gly Ile Tyr Ile Leu Asn Ser Glu Arg
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Pro Val Pro Gly Asp Tyr Ile Tyr Ile Arg Lys Lys Lys Gln Gln Asn
 35 40 45

Ser Asp Pro Gln Pro Lys Arg Gly Arg Gly Ser Arg Thr Ser Ala Thr
 50 55 60

Ala Asn His Ser Gly Val Leu Arg Gly Gly Ala Trp Pro Asp Asn Phe
 65 70 75 80

Gly Asp Ala Ala Gly Pro Ile Arg Thr Glu Glu Ser Glu Ala Pro Leu
 85 90 95

His Trp Ala Gln Val Arg Ser Ser Ala Ser Pro Gly Gly Gly Ala Arg
 100 105 110

Gly Met Glu Glu Ser Trp Glu Ala Ala Pro Gly Gly Gln Ala Gly Ala
 115 120 125

Glu Leu Pro Met Glu Pro Val Gly Ser Leu Val Pro Thr Leu Glu Gln
 130 135 140

Pro Gln Val Pro Ala Lys Val Arg Gln Pro Glu Gly Pro Glu Ser Ser
 145 150 155 160

Pro Ser Pro Ala Gly Ala Val Glu Lys Ala Ala Gly Ala Gly Leu Glu
 165 170 175

Pro Ser Ser Lys Lys Lys Pro Pro Ser Pro Arg Pro Gly Ser Pro Arg
 180 185 190

Val Pro Pro Leu Ser Leu Gly Tyr Gly Val Cys Pro Glu Pro Pro Ser
 195 200 205

Pro Gly Pro Ala Leu Val Lys Leu Pro Arg Asn Gly Glu Ala Pro Gly
 210 215 220

Ala	Glu	Pro	Ala	Pro	Ser	Ala	Trp	Ala	Pro	Met	Glu	Leu	Gln	Val	Asp
225					230					235					240
Val	Arg	Val	Lys	Pro	Val	Gly	Ala	Ala	Gly	Gly	Ser	Ser	Thr	Pro	Ser
				245					250					255	
Pro	Arg	Pro	Ser	Thr	Arg	Phe	Leu	Lys	Val	Pro	Val	Pro	Glu	Ser	Pro
			260					265					270		
Ala	Phe	Ser	Arg	His	Ala	Asp	Pro	Ala	His	Gln	Leu	Leu	Leu	Arg	Ala
		275					280					285			
Pro	Ser	Gln	Gly	Gly	Thr	Trp	Gly	Arg	Arg	Ser	Pro	Leu	Ala	Ala	Ala
	290					295					300				
Arg	Thr	Glu	Ser	Gly	Cys	Asp	Ala	Glu	Gly	Arg	Ala	Ser	Pro	Ala	Glu
305					310					315					320
Gly	Ser	Ala	Gly	Ser	Pro	Gly	Ser	Pro	Thr	Cys	Cys	Arg	Cys	Lys	Glu
				325					330					335	
Leu	Gly	Leu	Glu	Lys	Glu	Asp	Ala	Ala	Leu	Leu	Pro	Arg	Ala	Gly	Leu
			340					345					350		
Asp	Gly	Asp	Glu	Lys	Leu	Pro	Arg	Ala	Val	Thr	Leu	Thr	Gly	Leu	Pro
		355					360					365			
Met	Tyr	Val	Lys	Ser	Leu	Tyr	Trp	Ala	Leu	Ala	Phe	Met	Ala	Val	Leu
	370					375					380				
Leu	Ala	Val	Ser	Gly	Val	Val	Ile	Val	Val	Leu	Ala	Ser	Arg	Ala	Gly
385					390					395					400
Ala	Arg	Cys	Gln	Gln	Cys	Pro	Pro	Gly	Trp	Val	Leu	Ser	Glu	Glu	His
				405					410					415	
Cys	Tyr	Tyr	Phe	Ser	Ala	Glu	Ala	Gln	Ala	Trp	Glu	Ala	Ser	Gln	Ala
			420					425					430		
Phe	Cys	Ser	Ala	Tyr	His	Ala	Thr	Leu	Pro	Leu	Leu	Ser	His	Thr	Gln
		435					440					445			
Asp	Phe	Leu	Gly	Arg	Tyr	Pro	Val	Ser	Arg	His	Ser	Trp	Val	Gly	Ala
	450					455					460				
Trp	Arg	Gly	Pro	Gln	Gly	Trp	His	Trp	Ile	Asp	Glu	Ala	Pro	Leu	Pro
465					470					475					480

Pro Gln Leu Leu Pro Glu Asp Gly Glu Asp Asn Leu Asp Ile Asn Cys
 485 490 495

Gly Ala Leu Glu Glu Gly Thr Leu Val Ala Ala Asn Cys Ser Thr Pro
 500 505 510

Arg Pro Trp Val Cys Ala Lys Gly Thr Gln
 515 520

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<400> 140
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<210> 142
<211> 738
<212> PRT
<213> Homo sapiens
<400> 142

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Arg	Ser	Ile	Ala	Thr	Pro	Glu	Asn	Leu	Lys	Lys	Leu	Leu	Pro	Arg	Val	35	40	45	
Pro	Lys	Asn	Ser	Ala	Leu	Ser	Asp	Glu	Met	Thr	Lys	Leu	His	Lys	Gly	50	55	60	
Ala	Lys	Pro	Cys	Lys	Ser	Asn	Thr	Phe	Gly	Cys	Phe	Pro	Ile	His	Gln	65	70	75	80
Ala	Val	Leu	Ser	Gly	Ser	Lys	Glu	Cys	Met	Glu	Ile	Ile	Leu	Lys	Phe	85	90	95	
Gly	Glu	Glu	His	Gly	Tyr	Ser	Arg	Gln	Cys	His	Ile	Asn	Phe	Val	Asp	100	105	110	
Asn	Gly	Lys	Ala	Ser	Pro	Leu	His	Leu	Ala	Val	Gln	Asn	Gly	Asp	Leu	115	120	125	
Glu	Met	Met	Lys	Met	Cys	Leu	Asp	Asn	Gly	Val	Gln	Ile	Asp	Leu	Val	130	135	140	
Glu	Met	Gln	Gln	Ile	Lys	Glu	Leu	Val	Met	Asp	Glu	Asp	Asn	Asp	Gly	145	150	155	160
Cys	Thr	Pro	Leu	His	Tyr	Ala	Cys	Arg	Gln	Gly	Gly	Pro	Gly	Ser	Val	165	170	175	
Asn	Asn	Leu	Leu	Gly	Phe	Asn	Val	Ser	Ile	His	Ser	Lys	Ser	Lys	Asp	180	185	190	
Lys	Lys	Ser	Pro	Leu	His	Phe	Ala	Ala	Ser	Tyr	Gly	Arg	Ile	Asn	Thr	195	200	205	
Cys	Gln	Arg	Leu	Leu	Gln	Asp	Ile	Ser	Asp	Thr	Arg	Leu	Leu	Asn	Glu	210	215	220	
Gly	Asp	Leu	His	Gly	Met	Thr	Pro	Leu	His	Leu	Ala	Ala	Lys	Asn	Gly	225	230	235	240
His	Asp	Lys	Val	Val	Gln	Leu	Leu	Leu	Lys	Lys	Gly	Ala	Leu	Phe	Leu	245	250	255	

Arg Trp Asp Glu Cys Leu Lys Val Phe Ser His Tyr Ser Pro Asn Asn
 260 265 270

Lys Cys Pro Ile Leu Glu Met Ile Glu Tyr Leu Pro Glu Cys Met Lys
 275 280 285

Lys Val Leu Pro Phe Phe Ser Asn Val His Val Arg Pro Ala Pro Asn
 290 295 300

Gln Asn Gln Ile Asn His Gly Glu His Arg Leu Ala Tyr Gly Phe Ile
 305 310 315 320

Ala His Met Ile Asn Leu Gly Phe Tyr Cys Leu Gly Leu Ile Pro Met
 325 330 335

Thr Phe Leu Val Val Arg Ile Lys Pro Gly Met Ala Phe Asn Ser Ala
 340 345 350

Gly Ile Ile Asn Lys Thr Ser Asp His Ser Glu Ile Leu Asp Asn Met
 355 360 365

Asn Ser Ser Leu Ile Thr Ile Cys Met Ile Leu Val Phe Cys Ser Ser
 370 375 380

Ile Leu Gly Tyr Val Lys Glu Val Val Gln Ile Phe Gln Gln Lys Arg
 385 390 395 400

Asn Tyr Phe Met Asp Ile Ser Ser Ser Thr Glu Trp Ile Ile Asn Thr
 405 410 415

Met Gly Pro Ile Leu Val Leu Pro Leu Phe Thr Glu Ile Ala Ala His
 420 425 430

Leu Gln Phe Glu Asn Cys Gly Ile Phe Ile Val Ile Leu Glu Val Ile
 435 440 445

Phe Lys Thr Leu Leu Arg Ser Ala Val Val Phe Phe Phe Leu Leu Leu
 450 455 460

Ala Phe Gly Leu Ser Phe Tyr Val Leu Leu Asn Leu Gln Ser Phe Leu
 465 470 475 480

Glu Pro Phe Leu Lys Asn Lys Leu Ala His Pro Val Leu Ser Phe Ala
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Gln Leu Ile Ser Phe Thr Val Phe Ala Pro Ile Val Leu Met Asn Leu

Leu Tyr

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<210> 146
<211> 384
<212> PRT
<213> Homo sapiens

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<400> 146

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1           5           10           15

```

```

Phe Ile Phe Ala Ile Leu Leu Ile Leu Tyr Val Ile Leu Trp Asp Ala
          20           25           30

```

```

Pro Gly Arg Ala Gly Glu Cys Ala Arg Ala Gly Ala Leu Gly Gly His
          35           40           45

```

```

Gly Trp Gly Ala Pro Thr Ser Gly Arg Thr Arg Asn Pro Asp Ala Gly
50           55           60

```

```

Leu Asn Pro Arg Ile His Gly Ala Arg Gly Ser Pro Met Gly His Gly
65           70           75           80

```

```

Lys Arg Gln Met Arg Val Gln Arg Gly Pro Ser His Pro Pro Pro Gly
          85           90           95

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```

Arg Leu Gly Ser Lys Ala His Arg Arg Ser Arg Leu Trp Pro Pro Pro
          100          105          110

```

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Val Gln Gln Asn Ala Gly Ser Arg Val Gly Pro Met Arg Tyr Gly Thr
          115          120          125

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```

Pro Gly Ala Ile Gly Ser Leu Ala Leu Cys Ser Gly Gly Gly Asp Pro
          130          135          140

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Ala Leu Lys Phe Pro Ile Thr Ser Met Asp Lys His Gly Lys Ile Met
145           150           155           160

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```

Ser Trp Lys Asn Ser Ile Ala Leu Gln Ile Gln Thr Arg His Phe Ala
          165          170          175

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His Glu Thr Arg Val Pro Glu Ile Ser Arg Ser Lys Ser Arg Ile Arg
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Asp Arg Gln Thr Tyr Gly Met Tyr His Phe Gly Asn Phe Gly Glu Glu
195 200 205

Arg Ile Lys Ala Glu Met Arg Ile Gln Lys Ala Cys His Leu Lys Ile
210 215 220

Lys Lys Ser Ser Leu Asp Ala Asn Gly Lys Val Asp Asp Gly Glu Asp
225 230 235 240

Asp Asp Gly Glu Asp Asp Asp Gly Glu Asp Asp Asp Gly Asp Asp Asp
245 250 255

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260 265 270

Glu Asp Asp Gly Glu Asp Asp Asp Gly Asp Asp Asp Gly Glu Asp Asp
275 280 285

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Gly Glu Asp Asp Asp Gly Asp Ser Glu Asp Asp Gly Asp Asp Gly Asp
325 330 335

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Met Met Val Met Thr Val Thr Met Met Lys Asn Val Val Gly Asn Tyr
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<210> 148

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<400> 148
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<210> 149
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 <212> DNA
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tcta 4384

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<211> 1124
<212> PRT
<213> Homo sapiens

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```

```

Leu Cys Gly Gln Pro Ala Asp Tyr Leu Val Glu Glu Lys His Phe Thr
          20           25           30

```

```

Thr Leu Val Cys Phe Ile Val Val Leu Gly Gly Leu Leu Lys Met Cys
          35           40           45

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```

Leu Lys Asn Cys Glu Val Ile Val Leu Thr Ile Leu Ser Leu Ser Gly
          50           55           60

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Phe Val Ile Gly His Met Ala Tyr Asn Ser Val Glu Val His Gln Ile
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Val Tyr Pro Leu Leu Arg Thr Ser Ser Phe Ser Leu Tyr Ser Tyr Phe
85 90 95

Ser Pro Leu Ile Ile Phe Met Val Ala Leu Asp Val Glu Phe Tyr Thr
100 105 110

Leu Lys Lys Met Phe Trp Gln Val Leu Leu Thr Gly Leu Ile Ser Phe
115 120 125

Ser Thr Ala Ser Ile Ile Ile Gly Tyr Val Val Ile Lys Phe Asn Lys
130 135 140

Asp Ser Trp Asp Leu Gln Ser Cys Leu Leu Phe Ser Ile Thr Leu Gly
145 150 155 160

Ile Ile Asp Pro Leu Arg Ser Val Asn Ser Leu Lys Thr Ile Gly Ile
165 170 175

Ser Lys Ile Tyr Ile Asp Leu Ile Arg Gly Glu Ser Leu Ile Ile Cys
180 185 190

Ser Ile Ala Ser Ile Phe Phe Gly Asn Phe Arg Gly Asn Arg Ile His
195 200 205

Phe Ser Ile Phe Arg Asp Leu His Val Gly Ile Glu Leu Ser Tyr Asp
210 215 220

Ile Leu Gly Ser Ile Ile Phe Gly Tyr Trp Cys Ala Lys Ile Ile Gln
225 230 235 240

Cys Ile Leu Ala Asp Val Phe Ser Asn Met Leu Thr Asn Ile Ile Leu
245 250 255

Cys Phe Ser Met Val Tyr Met Thr Phe Tyr Ile Val Glu Phe Leu Gly
260 265 270

Met Ser Gly Thr Leu Ala Leu Ala Ala Val Gly Leu Asn Leu Asp Ser
275 280 285

Leu Thr Phe Lys Pro Lys Ile Glu Leu Val Ile Thr Lys Phe Leu Arg
290 295 300

Ile Phe Ser Ser Val Tyr Glu His Leu Ile Tyr Ala Phe Phe Gly Ile

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Phe Ile Phe Ile Leu Phe Thr Thr Val Asn Leu Val Arg Leu Leu Thr	340		345		350	
Ile Leu Leu Val Ser Pro Ile Leu Met His Ser Asn Tyr Glu Tyr Asn	355		360		365	
Trp Arg Trp Gly Val Val Ile Thr Trp Ser Gly Ile Lys Gly Val Phe	370		375		380	
Asn Leu Leu Trp Ala Pro Asp Val Tyr Asn Leu Ala Glu Arg Lys Val	385		390		395	400
Glu Val Pro Gln Met Phe Ile Leu Tyr Val Gln Val Ile Ser Leu Leu	405		410		415	
Thr Met Gly Ile Asn Ser Tyr Val Met Thr Gln Ser Ala Arg Lys Leu	420		425		430	
Asp Leu Cys Val Leu Ser Leu Pro Arg Gln Met Ile Leu Gln Asn Ala	435		440		445	
Thr Gln His Ile Gln Glu Ile Val Gln Asn Thr Ile Thr Leu Phe Lys	450		455		460	
Thr Glu Lys Ile Leu Thr Asn Val Asn Trp Thr Leu Val Glu Asp Lys	465		470		475	480
Thr Arg Ile Glu Tyr Ile Pro Phe Ser His Val Ser His Asn Asp Met	485		490		495	
Lys Thr Glu Ser Thr Thr Asp Glu Ala Leu Met Glu Glu Ala Arg Leu	500		505		510	
His Val Ala Ala Ile Gln Met Ser Ser Phe Glu Lys Gln Arg Asn Asn	515		520		525	
Gly Ile Leu Glu Ile Glu Ala Ala Arg Ile Leu Ile Gly Ala Ala Lys	530		535		540	
Cys Tyr Tyr Ser Ile Gln Gly Lys Phe Met Ser Ile Tyr Asp Val Ser	545		550		555	560

Thr Tyr Met Arg Thr Arg Ser Trp Leu Ile Lys Phe Lys Asn Val Leu
 565 570 575

Thr Phe Leu Glu Tyr Cys Ile Glu Lys Ile His Phe Ile Pro Pro Glu
 580 585 590

Ser Asn Thr Phe Leu Thr Phe Ile Phe His Ile Val Phe Ser Glu Glu
 595 600 605

Phe Glu Tyr Thr Gly Gln Ile Ile Asn Leu Ile Tyr Ile Tyr Pro Met
 610 615 620

Ile Ile His Leu Trp Pro Met Ala Arg Gly Leu Asn Val Ser Ala Leu
 625 630 635 640

Ile Ser Ile Asn Tyr Tyr Phe Met Phe Leu Tyr Val Leu Glu Ser Thr
 645 650 655

Leu Lys Ile Ile Ile Leu Lys Arg Lys Tyr Phe Gln Gln Cys Trp Asn
 660 665 670

Thr Leu Glu Phe Phe Ile Leu Val Ile Gly Ile Ile Asp Ile Phe Cys
 675 680 685

Val Tyr Phe Val Lys Leu Arg Pro Asp Asn Leu Ala Leu Ile Gln Leu
 690 695 700

Thr Val Ile Met Gly Tyr Leu Arg Ile Ile Arg Phe Leu Pro Leu Phe
 705 710 715 720

Lys Ile Ile Val Pro Ile Leu Ile Arg Ile Ala Asp Val Gln Ile Lys
 725 730 735

Lys Arg Leu Ser Leu Met Tyr Ser Ile Thr Lys Gly Tyr Ile Lys Ser
 740 745 750

Gln Glu Asp Ala Lys Leu Leu Ile Lys Gln Ile Ala Val Cys Glu Ser
 755 760 765

Ile Tyr Gln Lys Leu Cys Glu Ile Leu Glu Thr Asn Lys Gln Asp Ala
 770 775 780

Val Lys Glu Leu Val Leu Met Glu His Glu Gly Arg Asp Val Val Ile
 785 790 795 800

Ala Leu Lys Thr Lys Gln Ala Ile Arg Asn Val Ile Ala Lys Ala Leu
 805 810 815

Lys Asn Leu Thr Phe Leu Cys Ser Arg Gly Ile Ile Asp Lys His Glu
820 825 830

Val Ile Glu Ile Asn Lys Val Leu Leu Lys Lys Leu Lys Ala Leu Asn
835 840 845

Asn Phe Pro Lys Ala Ile Pro Pro Pro Thr Pro Asp Ile Tyr Leu His
850 855 860

Asn Ile Ile Trp Leu Glu Gly Lys Asp Val Leu Ile Asp Phe Phe Lys
865 870 875 880

Glu Arg Ala Lys Leu Ala Cys Phe Asp Ser Gly Asp Thr Ile Cys Lys
885 890 895

Gly Gly Glu Met Pro Gln Gly Ile Tyr Leu Ile Ile Ser Gly Met Ala
900 905 910

Ile Leu His Ser Leu Ser Pro Thr Phe Gly Ile Glu Ser Asn Gln Arg
915 920 925

Cys Asp Arg Gly Ser Arg Asp Met Phe Thr Glu Phe Cys Thr Thr Gly
930 935 940

Asp Ile Ile Gly Glu Leu Ser Cys Leu Leu Lys Arg Glu Ile Glu Tyr
945 950 955 960

Thr Val Ile Cys Glu Thr Ser Leu Gln Ala Cys Phe Ile Ser Leu Glu
965 970 975

Asp Leu Tyr Glu Gly Phe Asp Ala Phe Trp Pro Ser Leu Glu Tyr Lys
980 985 990

Ile Trp Leu Lys Leu Ala Leu Ser Thr Ala Tyr Gln Tyr Phe Glu Ser
995 1000 1005

Ser Leu Ile Asp Glu Asp Leu Arg Phe Gln Asn Cys Val Met Phe
1010 1015 1020

Asn Gln Ala Tyr Val Glu Thr Leu Ser Ser Tyr Ser Asp Met Ile
1025 1030 1035

Ile Asp Asn Met Thr Met Lys Phe Val Ile Ile Val Tyr Gly Ser
1040 1045 1050

Val Ile Asp Thr Lys Thr Glu Glu Pro Tyr Phe Ala Pro Cys Ile

1055

1060

1065

Ile Pro Thr Thr Cys Glu Gln Val Gln Gly Thr Ser Asp Leu Ser
 1070 1075 1080

Lys Leu Leu Ile Ile Gln Ala Ser Glu Leu Thr Gln Arg Asn Ser
 1085 1090 1095

Asn Thr Asn Val Met Ala Ser Val Asn Thr Val Phe Glu Gln Pro
 1100 1105 1110

Gly Lys Asn Ile Asn Gly Arg Gln Lys Met Ser
 1115 1120

<210> 151
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 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 151
 ctacaacctg tgagcaggtt c

21

<210> 152
 <211> 21
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<220>
 <223> Oligonucleotide

<400> 152
 cctgtttcag tggcttctaa g

21

<210> 153
 <211> 1189
 <212> DNA
 <213> Homo sapiens

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 gcaatgaaaa caaatgaatt ccttcttcca tgtttggact caaagactaa ggtggttatg 180
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<210> 154
<211> 341
<212> PRT
<213> Homo sapiens

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<400> 154

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Met Trp Ser His Leu Asn Arg Leu Leu Phe Trp Ser Ile Phe Ser Ser
1          5          10          15

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Val Thr Cys Arg Lys Ala Val Leu Asp Cys Glu Ala Met Lys Thr Asn
          20          25          30

```

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Glu Phe Pro Ser Pro Cys Leu Asp Ser Lys Thr Lys Val Val Met Lys
          35          40          45

```

```

Gly Gln Asn Val Ser Met Phe Cys Ser His Lys Asn Lys Ser Leu Gln
          50          55          60

```

```

Ile Thr Tyr Ser Leu Phe Arg Arg Lys Thr His Leu Gly Thr Gln Asp
65          70          75          80

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```

Gly Lys Gly Glu Pro Ala Ile Phe Asn Leu Ser Ile Thr Glu Ala His
          85          90          95

```

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Glu Ser Gly Pro Tyr Lys Cys Lys Ala Gln Val Thr Ser Cys Ser Lys
          100          105          110

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Tyr Ser Arg Asp Phe Ser Phe Thr Ile Val Asp Pro Val Thr Ser Pro
 115 120 125

Val Leu Asn Ile Met Val Ile Gln Thr Glu Thr Asp Arg His Ile Thr
 130 135 140

Leu His Cys Leu Ser Val Asn Gly Ser Leu Pro Ile Asn Tyr Thr Phe
 145 150 155 160

Phe Glu Asn His Val Ala Ile Ser Pro Ala Ile Ser Lys Tyr Asp Arg
 165 170 175

Glu Pro Ala Glu Phe Asn Leu Thr Lys Lys Asn Pro Gly Glu Glu Glu
 180 185 190

Glu Tyr Arg Cys Glu Ala Lys Asn Arg Leu Pro Asn Tyr Ala Thr Tyr
 195 200 205

Ser His Pro Val Thr Met Pro Ser Thr Gly Gly Asp Ser Cys Pro Phe
 210 215 220

Cys Leu Lys Leu Leu Leu Pro Gly Leu Leu Leu Leu Leu Val Val Ile
 225 230 235 240

Ile Leu Ile Leu Ala Phe Trp Val Leu Pro Lys Tyr Lys Thr Arg Lys
 245 250 255

Ala Met Arg Asn Asn Val Pro Arg Asp Arg Gly Asp Thr Ala Met Glu
 260 265 270

Val Gly Ile Tyr Ala Asn Ile Leu Glu Lys Gln Ala Lys Glu Glu Ser
 275 280 285

Val Pro Glu Val Gly Ser Arg Pro Cys Val Ser Thr Ala Gln Asp Glu
 290 295 300

Ala Lys His Ser Gln Glu Leu Gln Tyr Ala Thr Pro Val Phe Gln Glu
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Val Ala Pro Arg Glu Gln Glu Ala Cys Asp Ser Tyr Lys Ser Gly Tyr
 325 330 335

Val Tyr Ser Glu Ser
 340

<210> 155

<211> 21

<212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 155
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<210> 156
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 156
 acagagtgag actccatcct g 21

<210> 157
 <211> 2713
 <212> DNA
 <213> Homo sapiens

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<210> 158
 <211> 350
 <212> PRT

<213> Homo sapiens

<400> 158

Met Cys Arg Cys Pro Pro Glu His His Asp Gly Arg Met Thr Ser Ala
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Glu Val Gly Ala Ala Ala Gly Gly Ala Gln Ala Ala Gly Pro Pro Glu
 20 25 30

Trp Pro Pro Gly Ser Pro Gln Ala Leu Arg Gln Pro Gly Arg Ala Arg
 35 40 45

Val Ala Met Ala Ala Leu Val Trp Leu Leu Ala Gly Ala Ser Met Ser
 50 55 60

Ser Leu Asn Lys Trp Ile Phe Thr Val His Gly Phe Gly Arg Pro Leu
 65 70 75 80

Leu Leu Ser Ala Leu His Met Leu Val Ala Ala Leu Ala Cys His Arg
 85 90 95

Gly Ala Arg Arg Pro Met Pro Gly Gly Thr Arg Cys Arg Val Leu Leu
 100 105 110

Leu Ser Leu Thr Phe Gly Thr Ser Met Ala Cys Gly Asn Val Gly Leu
 115 120 125

Arg Ala Val Pro Leu Asp Leu Ala Gln Leu Val Thr Thr Thr Thr Pro
 130 135 140

Leu Phe Thr Leu Ala Leu Ser Ala Leu Leu Leu Gly Arg Arg His His
 145 150 155 160

Pro Leu Gln Leu Ala Ala Met Gly Pro Leu Cys Leu Gly Ala Ala Cys
 165 170 175

Ser Leu Ala Gly Glu Phe Arg Thr Pro Pro Thr Gly Cys Gly Phe Leu
 180 185 190

Leu Ala Ala Thr Cys Leu Arg Gly Leu Lys Ser Val Gln Gln Ser Ala
 195 200 205

Leu Leu Gln Glu Glu Arg Leu Asp Ala Val Thr Leu Leu Tyr Ala Thr
 210 215 220

Ser Leu Pro Ser Phe Cys Leu Leu Ala Gly Ala Ala Leu Val Leu Glu
 225 230 235 240


```

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<210> 162
<211> 305
<212> PRT
<213> Homo sapiens

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<400> 162
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1           5           10           15
```

```
Ser Tyr Leu Glu Ser Leu Val Lys Phe Phe Ile Pro Gln Arg Arg Lys
          20           25           30
```

```
Ser Val Ala Gly Glu Ile Val Leu Ile Thr Gly Ala Gly His Gly Ile
          35           40           45
```

```
Gly Arg Gln Thr Thr Tyr Glu Phe Ala Lys Arg Gln Ser Ile Leu Val
          50           55           60
```

```
Leu Trp Asp Ile Asn Lys Arg Gly Val Glu Glu Thr Ala Ala Glu Cys
65           70           75           80
```

```
Arg Lys Leu Gly Val Thr Ala His Ala Tyr Val Val Asp Cys Ser Asn
          85           90           95
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Arg Glu Glu Ile Tyr Arg Ser Leu Asn Gln Val Lys Lys Glu Val Gly
 100 105 110

Asp Val Thr Ile Val Val Asn Asn Ala Gly Thr Val Tyr Pro Ala Asp
 115 120 125

Leu Leu Ser Thr Lys Asp Glu Glu Ile Thr Lys Thr Phe Glu Val Asn
 130 135 140

Ile Leu Gly His Phe Trp Ile Thr Lys Ala Leu Leu Pro Ser Met Met
 145 150 155 160

Glu Arg Asn His Gly His Ile Val Thr Val Ala Ser Val Cys Gly His
 165 170 175

Glu Gly Ile Pro Tyr Leu Ile Pro Tyr Cys Ser Ser Lys Phe Ala Ala
 180 185 190

Val Gly Phe His Arg Gly Leu Thr Ser Glu Leu Gln Ala Leu Gly Lys
 195 200 205

Thr Gly Ile Lys Thr Ser Cys Leu Cys Pro Val Phe Val Asn Thr Gly
 210 215 220

Phe Thr Lys Asn Pro Ser Thr Arg Leu Trp Pro Val Leu Glu Thr Asp
 225 230 235 240

Glu Val Val Arg Ser Leu Ile Asp Gly Ile Leu Thr Asn Lys Lys Met
 245 250 255

Ile Phe Val Pro Ser Tyr Ile Asn Ile Phe Leu Arg Leu Gln Asn Pro
 260 265 270

Asp Asn Ile Lys Asn Ile Gly Leu Ala Leu Ala Ala Val Lys Arg Thr
 275 280 285

Arg Leu Ile Thr Cys Leu Pro Val Ser Gln Glu Tyr Leu Arg Ser Phe
 290 295 300

Ser
 305

<210> 163
 <211> 21
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 <213> Artificial Sequence

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<223> Oligonucleotide

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21

<210> 164

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide

<400> 164

tgcatacatc tctggctgga g

21

<210> 165

<211> 6014

<212> DNA

<213> Homo sapiens

<400> 165

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<211> 817

<212> PRT

<213> Homo sapiens

<400> 166

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Leu Ser Ala Gly Val Asn Cys Thr Phe Glu Asp Leu Ser Glu Met Asp
35 40 45

Gly Leu Val Val Gly Asn Gln Ile Gln Cys Tyr Ser Pro Ala Ala Lys
50 55 60

Glu Val Pro Arg Ile Ile Thr Glu Asn Gly Asp His His Val Val Gln
65 70 75 80

Leu Gln Leu Lys Ser Lys Glu Thr Gly Met Thr Phe Ala Ser Thr Ser
85 90 95

Phe Val Phe Tyr Asn Cys Ser Val His Asn Ser Cys Leu Ser Cys Val
100 105 110

Glu Ser Pro Tyr Arg Cys His Trp Cys Lys Tyr Arg His Val Cys Thr
115 120 125

His Asp Pro Lys Thr Cys Ser Phe Gln Glu Gly Arg Val Lys Leu Pro
130 135 140

Glu Asp Cys Pro Gln Leu Leu Arg Val Asp Lys Ile Leu Val Pro Val
145 150 155 160

Glu Val Ile Lys Pro Ile Thr Leu Lys Ala Lys Asn Leu Pro Gln Pro
165 170 175

Gln Ser Gly Gln Arg Gly Tyr Glu Cys Ile Leu Asn Ile Gln Gly Ser
180 185 190

Glu Gln Arg Val Pro Ala Leu Arg Phe Asn Ser Ser Ser Val Gln Cys
195 200 205

Gln Asn Thr Ser Tyr Ser Tyr Glu Gly Met Glu Ile Asn Asn Leu Pro
210 215 220

Val Glu Leu Thr Val Val Trp Asn Gly His Phe Asn Ile Asp Asn Pro
225 230 235 240

Ala Gln Asn Lys Val His Leu Tyr Lys Cys Gly Ala Met Arg Glu Ser
245 250 255

Cys Gly Leu Cys Leu Lys Ala Asp Pro Asp Phe Ala Cys Gly Trp Cys
260 265 270

Gln Gly Pro Gly Gln Cys Thr Leu Arg Gln His Cys Pro Ala Gln Glu
275 280 285

Ser Gln Trp Leu Glu Leu Ser Gly Ala Lys Ser Lys Cys Thr Asn Pro
290 295 300

Arg Ile Thr Glu Ile Ile Pro Val Thr Gly Pro Arg Glu Gly Gly Thr

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Lys Val Thr Ile Arg Gly Glu Asn Leu Gly Leu Glu Phe Arg Asp Ile						
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Ala Ser His Val Lys Val Ala Gly Val Glu Cys Ser Pro Leu Val Asp						
		340		345		350
Gly Tyr Ile Pro Ala Glu Gln Ile Val Cys Glu Met Gly Glu Ala Lys						
		355		360		365
Pro Ser Gln His Ala Gly Phe Val Glu Ile Cys Val Ala Val Cys Arg						
		370		375		380
Pro Glu Phe Met Ala Arg Ser Ser Gln Leu Tyr Tyr Phe Met Thr Leu						
		385		390		400
Thr Leu Ser Asp Leu Lys Pro Ser Arg Gly Pro Met Ser Gly Gly Thr						
		405		410		415
Gln Val Thr Ile Thr Gly Thr Asn Leu Asn Ala Gly Ser Asn Val Val						
		420		425		430
Val Met Phe Gly Lys Gln Pro Cys Leu Phe His Arg Arg Ser Pro Ser						
		435		440		445
Tyr Ile Val Cys Asn Thr Thr Ser Ser Asp Glu Val Leu Glu Met Lys						
		450		455		460
Val Ser Val Gln Val Asp Arg Ala Lys Ile His Gln Asp Leu Val Phe						
		465		470		475
Gln Tyr Val Glu Asp Pro Thr Ile Val Arg Ile Glu Pro Glu Trp Ser						
		485		490		495
Ile Val Ser Gly Asn Thr Pro Ile Ala Val Trp Gly Thr His Leu Asp						
		500		505		510
Leu Ile Gln Asn Pro Gln Ile Arg Ala Lys His Gly Gly Lys Glu His						
		515		520		525
Ile Asn Ile Cys Glu Val Leu Asn Ala Thr Glu Met Thr Cys Gln Ala						
		530		535		540
Pro Ala Leu Ala Leu Gly Pro Asp His Gln Ser Asp Leu Thr Glu Arg						
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Pro Glu Glu Phe Gly Phe Ile Leu Asp Asn Val Gln Ser Leu Leu Ile
 565 570 575

Leu Asn Lys Thr Asn Phe Thr Tyr Tyr Pro Asn Pro Val Phe Glu Ala
 580 585 590

Phe Gly Pro Ser Gly Ile Leu Glu Leu Lys Pro Gly Thr Pro Ile Ile
 595 600 605

Leu Lys Gly Lys Asn Leu Ile Pro Pro Val Ala Gly Gly Asn Val Lys
 610 615 620

Leu Asn Tyr Thr Val Leu Val Gly Glu Lys Pro Cys Thr Val Thr Val
 625 630 635 640

Ser Asp Val Gln Leu Leu Cys Glu Ser Pro Asn Leu Ile Gly Arg His
 645 650 655

Lys Val Met Ala Arg Val Gly Gly Met Glu Tyr Ser Pro Gly Met Val
 660 665 670

Tyr Ile Ala Pro Asp Ser Pro Leu Ser Leu Pro Ala Ile Val Ser Ile
 675 680 685

Ala Val Ala Gly Gly Leu Leu Ile Ile Phe Ile Val Ala Val Leu Ile
 690 695 700

Ala Tyr Lys Arg Lys Ser Arg Glu Ser Asp Leu Thr Leu Lys Arg Leu
 705 710 715 720

Gln Met Gln Met Asp Asn Leu Glu Ser Arg Val Ala Leu Glu Cys Lys
 725 730 735

Glu Gly Thr Glu Trp Pro His Ala Gly Gly His Val Cys Val Arg Val
 740 745 750

Cys Ile Cys Val Cys Met His Ile Cys Val Cys Val Cys Ile Cys Phe
 755 760 765

Ile Tyr Lys Gln Ala Gly Trp Ala Ala Val Gly Ser Ala Gly Gly Trp
 770 775 780

Arg Cys Val Cys Leu Cys Glu Cys Val Cys Val His Val Cys Val Cys
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Thr Ser Val Cys Ile Tyr Val Ser Tyr Thr Ser Lys Gln Ala Gly Gln
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 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

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<210> 168
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<220>
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<400> 168
 tctgagagag tcagtgtcat g 21

<210> 169
 <211> 2565
 <212> DNA
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 ggaataacag ttgtaggaat ttgctgtgtg tatgaagtgt ttattgcca ggggtatact 300
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 tctatgctgc agacactagt aaaactcatt gtcttgatgt tcagtacatt attacttggt 420
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ttaaaaagac tagaagagat tgaacgtatt ttaaattggtg aataa 2565

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<211> 733
<212> PRT

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<213> Homo sapiens

<400> 170

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Phe Thr Arg Phe Asp Asn Pro Ala Ala Val Ser Pro Thr Pro Thr Arg
 35 40 45

Gln Leu Thr Phe Asn Tyr Leu Leu Pro Val Asn Ala Trp Leu Leu Leu
 50 55 60

Asn Pro Ser Glu Leu Cys Cys Asp Trp Thr Met Gly Thr Ile Pro Leu
 65 70 75 80

Ile Glu Ser Leu Leu Asp Ile Arg Asn Leu Ala Thr Phe Thr Phe Phe
 85 90 95

Cys Phe Leu Gly Met Leu Gly Val Phe Ser Ile Arg Tyr Ser Gly Asp
 100 105 110

Ser Ser Lys Thr Val Leu Met Leu Pro Ala Lys Thr Asp Met Gly Gln
 115 120 125

Lys Phe Glu Lys Ser Ser Glu Asp Ser Lys Gln Ser Arg Arg Val Glu
 130 135 140

Gly Thr Phe Gln Arg Asn Leu Glu Ile Pro Asn Ser Leu Lys Asp Lys
 145 150 155 160

Phe Glu Leu Gly Ala His Ala Phe Met Thr Val Leu Ile Cys Ser Ala
 165 170 175

Leu Gly Leu Ser Leu Ala Val Arg Cys His Ser Val Gly Phe Val Val
 180 185 190

Ala Glu Arg Val Leu Tyr Val Pro Ser Met Gly Phe Cys Ile Leu Val
 195 200 205

Ala His Gly Trp Gln Lys Ile Ser Thr Lys Ser Val Phe Lys Lys Leu
 210 215 220

Ser Trp Ile Cys Leu Ser Met Val Ile Leu Thr His Ser Leu Lys Thr
 225 230 235 240

Phe His Arg Asn Trp Asp Trp Glu Ser Glu Tyr Thr Leu Phe Met Ser
245 250 255

Ala Leu Lys Val Asn Lys Asn Asn Ala Lys Leu Trp Asn Asn Val Gly
260 265 270

His Ala Leu Glu Asn Glu Lys Asn Phe Glu Arg Ala Leu Lys Tyr Phe
275 280 285

Leu Gln Ala Thr His Val Gln Pro Asp Asp Ile Gly Ala His Met Asn
290 295 300

Val Gly Arg Thr Tyr Lys Asn Leu Asn Arg Thr Lys Glu Ala Glu Glu
305 310 315 320

Ser Tyr Met Met Ala Lys Ser Leu Met Pro Gln Ile Ile Pro Gly Lys
325 330 335

Lys Tyr Ala Ala Arg Ile Ala Pro Asn His Leu Asn Val Tyr Ile Asn
340 345 350

Leu Ala Asn Leu Ile Arg Ala Asn Glu Ser Arg Leu Glu Glu Ala Asp
355 360 365

Gln Leu Tyr Arg Gln Ala Ile Ser Met Arg Pro Asp Phe Lys Gln Ala
370 375 380

Tyr Ile Ser Arg Gly Glu Leu Leu Leu Lys Met Asn Lys Pro Leu Lys
385 390 395 400

Ala Lys Glu Ala Tyr Leu Lys Ala Leu Glu Leu Asp Arg Asn Asn Ala
405 410 415

Asp Leu Trp Tyr Asn Leu Ala Ile Val His Ile Glu Leu Lys Glu Pro
420 425 430

Asn Glu Ala Leu Lys Asn Phe Asn Arg Ala Leu Glu Leu Asn Pro Lys
435 440 445

His Lys Leu Ala Leu Phe Asn Ser Ala Ile Val Met Gln Glu Ser Gly
450 455 460

Glu Val Lys Leu Arg Pro Glu Ala Arg Lys Arg Leu Leu Ser Tyr Ile
465 470 475 480

Asn Glu Glu Pro Leu Asp Ala Asn Gly Tyr Phe Asn Leu Gly Met Leu

485

490

495

Ala Met Asp Asp Lys Lys Asp Asn Glu Ala Glu Ile Trp Met Lys Lys
 500 505 510

Ala Ile Lys Leu Gln Ala Asp Phe Arg Ser Ala Leu Phe Asn Leu Ala
 515 520 525

Leu Leu Tyr Ser Gln Thr Ala Lys Glu Leu Lys Ala Leu Pro Ile Leu
 530 535 540

Glu Glu Leu Leu Arg Tyr Tyr Pro Asp His Ile Lys Gly Leu Ile Leu
 545 550 555 560

Lys Gly Asp Ile Leu Met Asn Gln Lys Lys Asp Ile Leu Gly Ala Lys
 565 570 575

Lys Cys Phe Glu Arg Ile Leu Glu Met Asp Pro Ser Asn Val Gln Gly
 580 585 590

Lys His Asn Leu Cys Val Val Tyr Phe Glu Glu Lys Asp Leu Leu Lys
 595 600 605

Ala Glu Arg Cys Leu Leu Glu Thr Leu Ala Leu Ala Pro His Glu Glu
 610 615 620

Tyr Ile Gln Arg His Leu Asn Ile Val Arg Asp Lys Ile Ser Ser Ser
 625 630 635 640

Ser Phe Ile Glu Pro Ile Phe Pro Thr Ser Lys Ile Ser Ser Val Glu
 645 650 655

Gly Lys Lys Ile Pro Thr Glu Ser Val Lys Glu Ile Arg Gly Glu Ser
 660 665 670

Arg Gln Thr Gln Ile Val Lys Thr Ser Asp Asn Lys Ser Gln Ser Lys
 675 680 685

Ser Asn Lys Gln Leu Gly Lys Asn Gly Asp Glu Glu Thr Pro His Lys
 690 695 700

Thr Thr Lys Asp Ile Lys Glu Ile Glu Lys Lys Arg Val Ala Ala Leu
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Lys Arg Leu Glu Glu Ile Glu Arg Ile Leu Asn Gly Glu
 725 730

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<220>
 <223> Oligonucleotide

<400> 171
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<210> 172
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<220>
 <223> Oligonucleotide

<400> 172
 cgttttctag cttcaggtct g 21

<210> 173
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 <212> DNA
 <213> Homo sapiens

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<400> 174

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Ala Gly Tyr Arg Pro Leu His Gln Thr Trp Arg Phe Tyr Phe Arg Thr
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Leu Phe Gln Gln His Asn Glu Ala Val Asn Val Trp Thr His Leu Leu
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Ala Ala Leu Val Leu Leu Leu Arg Leu Ala Leu Phe Val Glu Thr Val
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Asp Phe Trp Gly Asp Pro His Ala Leu Pro Leu Phe Ile Ile Val Leu
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Ala Ser Phe Thr Tyr Leu Ser Phe Ser Ala Leu Ala His Leu Leu Gln
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Ala Lys Ser Glu Phe Trp His Tyr Ser Phe Phe Phe Leu Asp Tyr Val
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Gly Val Ala Val Tyr Gln Phe Gly Ser Ala Leu Ala His Phe Tyr Tyr
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Ala Ile Glu Pro Ala Trp His Ala Gln Val Gln Ala Val Phe Leu Pro
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Met Ala Ala Phe Leu Ala Trp Leu Ser Cys Ile Gly Ser Cys Tyr Asn
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Lys Tyr Ile Gln Lys Pro Gly Leu Leu Gly Arg Thr Cys Gln Glu Val
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Pro Ser Val Leu Ala Tyr Ala Leu Asp Ile Ser Pro Val Val His Arg
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Ile Phe Val Ser Ser Asp Pro Thr Thr Asp Asp Pro Ala Leu Leu Tyr
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His Lys Cys Gln Val Val Phe Phe Leu Leu Ala Ala Ala Phe Phe Ser
 245 250 255

Thr Phe Met Pro Glu Arg Trp Phe Pro Gly Ser Cys His Val Phe Gly
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Gln Gly His Gln Leu Phe His Ile Phe Leu Val Leu Cys Thr Leu Ala
 275 280 285

Gln Leu Glu Ala Val Ala Leu Asp Tyr Glu Ala Arg Arg Pro Ile Tyr
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Glu Pro Leu His Thr His Trp Pro His Asn Phe Ser Gly Leu Phe Leu
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<212> DNA

<213> Homo sapiens

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<210> 176
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<212> PRT
<213> Homo sapiens

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<400> 176

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Arg Asp Ser Trp Phe Arg Gly Leu Ile Leu Leu Leu Thr Phe Leu Ile
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```

Tyr Ala Cys Tyr His Met Ser Arg Lys Pro Ile Ser Ile Val Lys Ser
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Arg Leu His Gln Asn Cys Ser Glu Gln Ile Lys Pro Ile Asn Asp Thr
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His Ser Leu Asn Asp Thr Met Trp Cys Ser Trp Ala Pro Phe Asp Lys
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Asp Asn Tyr Lys Glu Leu Leu Gly Gly Val Asp Asn Ala Phe Leu Ile
          85           90           95

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Ala Tyr Ala Ile Gly Met Phe Ile Ser Gly Val Phe Gly Glu Arg Leu
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Pro Leu Arg Tyr Tyr Leu Ser Ala Gly Met Leu Leu Ser Gly Leu Phe
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 Thr Ser Leu Phe Gly Leu Gly Tyr Phe Trp Asn Ile His Glu Leu Trp
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 Tyr Phe Val Val Ile Gln Val Cys Asn Gly Leu Val Gln Thr Thr Gly
 145 150 155 160
 Trp Pro Ser Val Val Thr Cys Val Gly Asn Trp Phe Gly Lys Gly Lys
 165 170 175
 Arg Gly Phe Ile Met Gly Ile Trp Asn Ser His Thr Ser Val Gly Asn
 180 185 190
 Ile Leu Gly Ser Leu Ile Ala Gly Ile Trp Val Asn Gly Gln Trp Gly
 195 200 205
 Leu Ser Phe Ile Val Pro Gly Ile Ile Thr Ala Val Met Gly Val Ile
 210 215 220
 Thr Phe Leu Phe Leu Ile Glu His Pro Glu Asp Val Asp Cys Ala Pro
 225 230 235 240
 Pro Gln His His Gly Glu Pro Ala Glu Asn Gln Asp Asn Pro Glu Asp
 245 250 255
 Pro Gly Asn Ser Pro Cys Ser Ile Arg Glu Ser Gly Leu Glu Thr Val
 260 265 270
 Ala Lys Cys Ser Lys Gly Pro Cys Glu Glu Pro Ala Ala Ile Ser Phe
 275 280 285
 Phe Gly Ala Leu Arg Ile Pro Gly Val Val Glu Phe Ser Leu Cys Leu
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 Tyr Ile Ala Asn Val Ala His Phe Ser Ala Lys Glu Ala Gly Asp Leu
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 Ser Thr Leu Phe Asp Val Gly Gly Ile Ile Gly Gly Ile Val Ala Gly
 340 345 350
 Leu Val Ser Asp Tyr Thr Asn Gly Arg Ala Thr Thr Cys Cys Val Met
 355 360 365

Leu Ile Leu Ala Ala Pro Met Met Phe Leu Tyr Asn Tyr Ile Gly Gln
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Asp Gly Ile Ala Ser Ser Ile Val Met Leu Ile Ile Cys Gly Gly Leu
 385 390 395 400

Val Asn Gly Pro Tyr Ala Leu Ile Thr Thr Ala Val Ser Ala Asp Leu
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Gly Thr His Lys Ser Leu Lys Gly Asn Ala Lys Ala Leu Ser Thr Val
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Thr Ala Ile Ile Asp Gly Thr Gly Ser Ile Gly Ala Ala Leu Gly Pro
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Leu Leu Ala Gly Leu Ile Ser Pro Thr Gly Trp Asn Asn Val Phe Tyr
 450 455 460

Met Leu Ile Ser Ala Asp Val Leu Ala Cys Leu Leu Leu Cys Arg Leu
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Val Tyr Lys Glu Ile Leu Ala Trp Lys Val Ser Leu Ser Arg Gly Ser
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Gly Tyr Lys Glu Ile
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21

<210> 179

<211> 4892
 <212> DNA
 <213> Homo sapiens

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<210> 180
<211> 95
<212> PRT
<213> Homo sapiens

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<400> 180
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20          25          30
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Ala Ile Phe Cys Ser Ser Leu Leu Asp Ser Val Pro Gln Lys Val Glu
35          40          45
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Phe Phe Ile Asn Tyr Ser Ser Trp Gly Leu Met Pro Val Gly Phe Asp
 50 55 60

Gln Trp Val Thr Pro Ser Val Asp Trp Arg Met Glu Lys Glu Lys Arg
 65 70 75 80

Leu Gly Tyr Val Ser Pro Pro Leu Phe Leu Leu Leu Ala Gly Phe
 85 90 95

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<400> 181
 gctcaacgat tctgg 15

<210> 182
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<400> 182
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<210> 183
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 <213> Homo sapiens

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 gccctctga ggtgtgactc cactcctcct gaggggtgctg taggagacat ctgcaaaaaa 180
 gaagatgctg gcaatatgcc atcaacctca gaggggagta ttaccctga aatggctcac 240
 ttctgagga acaaacttgc tggatctagt gtacggaaac ctgattctgg gttcctttgg 300
 gaaggagcat tacgggcctg gttatttctc atcctaatag ttctcaccca catcatgtgg 360
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<210> 184
 <211> 166
 <212> PRT
 <213> Homo sapiens

<400> 184

Met Asn Arg Ser Ile Tyr Asp Arg Gln Leu Leu Cys Val Leu Leu Ala
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Ser Gln Glu Phe Pro Ala His Glu Gly Arg Gly Asp Glu Glu Arg Pro
 20 25 30

Ile Asp Val Arg Val Val Gln Ala Ala Pro Leu Arg Cys Asp Ser Thr
 35 40 45

Pro Pro Glu Gly Ala Val Gly Asp Ile Cys Lys Lys Glu Asp Ala Gly
 50 55 60

Asn Met Pro Ser Thr Ser Glu Gly Ser Ile Tyr Pro Glu Met Ala His
 65 70 75 80

Phe Leu Arg Asn Lys Leu Ala Gly Ser Ser Val Arg Lys Pro Asp Ser
 85 90 95

Gly Phe Leu Trp Glu Gly Ala Leu Arg Ala Trp Leu Phe Leu Ile Leu
 100 105 110

Ile Val Leu Thr His Ile Met Trp Val Pro Leu Val Gln Val Ser Pro
 115 120 125

Asn Ala Pro Leu Phe His Tyr Ile Glu Ser Ile Ala His Asp Leu Gly
 130 135 140

Pro Pro Ile Gly Ala Ile Phe Leu Leu Ser Ile Ser Trp Ser Ile Val
 145 150 155 160

Lys Glu Pro Met Ser Arg
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<400> 185
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<210> 186
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<400> 186
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<210> 187
 <211> 3978
 <212> DNA
 <213> Homo sapiens

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taaaatgtat taaaatat 3978

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<210> 188
<211> 1129
<212> PRT
<213> Homo sapiens

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<400> 188
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Met Ala Gly Ile Phe Lys Glu Phe Phe Phe Ser Thr Glu Asp Leu Pro
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Glu Val Ile Leu Thr Leu Ser Leu Ile Ser Ser Ile Gly Ala Phe Leu
          20           25           30

```

```

Asn Arg His Leu Glu Asp Phe Pro Ile Pro Val Pro Val Ile Leu Phe
          35           40           45

```

```

Leu Leu Gly Cys Ser Phe Glu Val Leu Ser Phe Thr Ser Ser Gln Val
          50           55           60

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```

Gln Arg Tyr Ala Asn Ala Ile Gln Trp Met Ser Pro Asp Leu Phe Phe
65           70           75           80

```

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Arg Ile Phe Thr Pro Val Val Phe Phe Thr Thr Ala Phe Asp Met Asp
          85           90           95

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Thr Tyr Met Leu Gln Lys Leu Phe Trp Gln Ile Leu Leu Ile Ser Ile
          100          105          110

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Pro Gly Phe Leu Val Asn Tyr Ile Leu Val Leu Trp His Leu Ala Ser
 115 120 125

Val Asn Gln Leu Leu Leu Lys Pro Thr Gln Trp Leu Leu Phe Ser Ala
 130 135 140

Ile Leu Val Ser Ser Asp Pro Met Leu Thr Ala Ala Ala Ile Arg Asp
 145 150 155 160

Leu Gly Leu Ser Arg Ser Leu Ile Ser Leu Ile Asn Gly Glu Ser Leu
 165 170 175

Met Thr Ser Val Ile Ser Leu Ile Thr Phe Thr Ser Ile Met Asp Phe
 180 185 190

Asp Gln Arg Leu Gln Ser Lys Arg Asn His Thr Leu Ala Glu Glu Ile
 195 200 205

Val Gly Gly Ile Cys Ser Tyr Ile Ile Ala Ser Phe Leu Phe Gly Ile
 210 215 220

Leu Ser Ser Lys Leu Ile Gln Phe Trp Met Ser Thr Val Phe Gly Asp
 225 230 235 240

Asp Val Asn His Ile Ser Leu Ile Phe Ser Ile Leu Tyr Leu Ile Phe
 245 250 255

Tyr Ile Cys Glu Leu Val Gly Met Ser Gly Ile Phe Thr Leu Ala Ile
 260 265 270

Val Gly Leu Leu Leu Asn Ser Thr Ser Phe Lys Ala Ala Ile Glu Glu
 275 280 285

Thr Leu Leu Leu Glu Phe Leu Thr Leu Leu Leu Ile Ser Pro Val Leu
 290 295 300

Ser Arg Val Gly His Glu Phe Ser Trp Arg Trp Ile Phe Ile Met Val
 305 310 315 320

Cys Ser Glu Met Lys Gly Met Pro Asn Ile Asn Met Ala Leu Leu Leu
 325 330 335

Ala Tyr Ser Asp Leu Tyr Phe Gly Ser Asp Lys Glu Lys Ser Gln Ile
 340 345 350

Leu Phe His Gly Val Leu Val Cys Leu Ile Thr Leu Val Val Asn Arg

355

360

365

Phe Ile Leu Pro Val Ala Val Thr Ile Leu Gly Leu Arg Asp Ala Thr
 370 375 380

Ser Thr Lys Tyr Lys Ser Val Cys Cys Thr Phe Gln His Phe Gln Glu
 385 390 395 400

Leu Thr Lys Ser Ala Ala Ser Ala Leu Lys Phe Asp Lys Asp Leu Ala
 405 410 415

Asn Ala Asp Trp Asn Met Ile Glu Lys Ala Ile Thr Leu Glu Asn Pro
 420 425 430

Tyr Met Leu Asn Glu Glu Glu Thr Thr Glu His Gln Lys Val Lys Cys
 435 440 445

Pro His Cys Asn Lys Glu Ile Asp Glu Ile Phe Asn Thr Glu Ala Met
 450 455 460

Glu Leu Ala Asn Arg Arg Leu Leu Ser Ala Gln Ile Ala Ser Tyr Gln
 465 470 475 480

Arg Gln Tyr Arg Asn Glu Ile Leu Ser Gln Ser Ala Val Gln Val Leu
 485 490 495

Val Gly Ala Ala Glu Ser Phe Gly Glu Lys Lys Gly Lys Cys Met Ser
 500 505 510

Leu Asp Thr Ile Lys Asn Tyr Ser Glu Ser Gln Lys Thr Val Thr Phe
 515 520 525

Ala Arg Lys Leu Leu Leu Asn Trp Val Tyr Asn Thr Arg Lys Glu Lys
 530 535 540

Glu Gly Pro Ser Lys Tyr Phe Phe Phe Arg Ile Cys His Thr Ile Val
 545 550 555 560

Phe Thr Glu Glu Phe Glu His Val Gly Tyr Leu Val Ile Leu Met Asn
 565 570 575

Ile Phe Pro Phe Ile Ile Ser Trp Ile Ser Gln Leu Asn Val Ile Tyr
 580 585 590

His Ser Glu Leu Lys His Thr Asn Tyr Cys Phe Leu Thr Leu Tyr Ile
 595 600 605

Leu Glu Ala Leu Leu Lys Ile Ala Ala Met Arg Lys Asp Phe Phe Ser
610 615 620

His Ala Trp Asn Ile Phe Glu Leu Ala Ile Thr Leu Ile Gly Ile Leu
625 630 635 640

His Val Ile Leu Ile Glu Ile Asp Thr Ile Lys Tyr Ile Phe Asn Glu
645 650 655

Thr Glu Val Ile Val Phe Ile Lys Val Val Gln Phe Phe Arg Ile Leu
660 665 670

Arg Ile Phe Lys Leu Ile Ala Pro Lys Leu Leu Gln Ile Ile Asp Lys
675 680 685

Arg Met Ser His Gln Lys Thr Phe Trp Tyr Gly Ile Leu Lys Gly Tyr
690 695 700

Val Gln Gly Glu Ala Asp Ile Met Thr Ile Ile Asp Gln Ile Thr Ser
705 710 715 720

Ser Lys Gln Ile Lys Gln Met Leu Leu Lys Gln Val Ile Arg Asn Met
725 730 735

Glu His Ala Ile Lys Glu Leu Gly Tyr Leu Glu Tyr Asp His Pro Glu
740 745 750

Ile Ala Val Thr Val Lys Thr Lys Glu Glu Ile Asn Val Met Leu Asn
755 760 765

Met Ala Thr Glu Ile Leu Lys Ala Phe Gly Leu Lys Gly Ile Ile Ser
770 775 780

Lys Thr Glu Gly Ala Gly Ile Asn Lys Leu Ile Met Ala Lys Lys Lys
785 790 795 800

Glu Val Leu Asp Ser Gln Ser Ile Ile Arg Pro Leu Thr Val Glu Glu
805 810 815

Val Leu Tyr His Ile Pro Trp Leu Asp Lys Asn Lys Asp Tyr Ile Asn
820 825 830

Phe Ile Gln Glu Lys Ala Lys Val Val Thr Phe Asp Cys Gly Asn Asp
835 840 845

Ile Phe Glu Glu Gly Asp Glu Pro Lys Gly Ile Tyr Ile Ile Ile Ser
850 855 860

Gly Met Val Lys Leu Glu Lys Ser Lys Pro Gly Leu Gly Ile Asp Gln
865 870 875 880

Met Val Glu Ser Lys Glu Lys Asp Phe Pro Ile Ile Asp Thr Asp Tyr
885 890 895

Met Leu Ser Gly Glu Ile Ile Gly Glu Ile Asn Cys Leu Thr Asn Glu
900 905 910

Pro Met Lys Tyr Ser Ala Thr Cys Lys Thr Val Val Glu Thr Cys Phe
915 920 925

Ile Pro Lys Thr His Leu Tyr Asp Ala Phe Glu Gln Cys Ser Pro Leu
930 935 940

Ile Lys Gln Lys Met Trp Leu Lys Leu Gly Leu Ala Ile Thr Ala Arg
945 950 955 960

Lys Ile Arg Glu His Leu Ser Tyr Glu Asp Trp Asn Tyr Asn Met Gln
965 970 975

Leu Lys Leu Ser Asn Ile Tyr Val Val Asp Ile Pro Met Ser Thr Lys
980 985 990

Thr Asp Ile Tyr Asp Glu Asn Leu Ile Tyr Val Ile Leu Ile His Gly
995 1000 1005

Ala Val Glu Asp Cys Leu Leu Arg Lys Thr Tyr Arg Ala Pro Phe
1010 1015 1020

Leu Ile Pro Ile Thr Cys His Gln Ile Gln Ser Ile Glu Asp Phe
1025 1030 1035

Thr Lys Val Val Ile Ile Gln Thr Pro Ile Asn Met Lys Thr Phe
1040 1045 1050

Arg Arg Asn Ile Arg Lys Phe Val Pro Lys His Lys Ser Tyr Leu
1055 1060 1065

Thr Pro Gly Leu Ile Gly Ser Val Gly Thr Leu Glu Glu Gly Ile
1070 1075 1080

Gln Glu Glu Arg Asn Val Lys Glu Asp Gly Ala His Ser Ala Ala
1085 1090 1095

Thr Ala Arg Ser Pro Gln Pro Cys Ser Leu Leu Gly Thr Lys Phe

1100

1105

1110

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 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 189
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<210> 190
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<220>
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<400> 190
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<210> 191
 <211> 2898
 <212> DNA
 <213> Homo sapiens

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<210> 192
<211> 965
<212> PRT
<213> Homo sapiens

<400> 192

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Met Trp Val Arg Cys Ala Leu Leu Val Ala Arg Asp Cys Gly Cys Ala
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Glu Arg Val Cys Pro Ser Val Val Arg Asp Arg Val Cys Val Val Gly
          20           25           30

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Ala Gly Lys Ile His Thr Lys Glu Lys Asn Ile Ala His Leu Leu Glu
          35           40           45

```

```

Met Lys Tyr Phe Lys Phe Asn Ile Ser Leu Ala Asn Ala Glu Phe Ile
          50           55           60

```

```

Ser Gln Asp Ser Trp Leu Ala Trp Val Gly Phe Val Lys Val Val Lys
65           70           75           80

```

```

Tyr Lys Ala Tyr Cys Lys Arg Tyr Gln Val Thr Phe Arg Arg Gln Cys
          85           90           95

```

```

Glu Gly Lys Thr Asp Tyr Tyr Ala Trp Lys His Leu Val Val Gln Asp
          100          105          110

```

```

Lys Asn Lys Ser Asn Thr His Lys Tyr Arg Met Ile Ile Cys Val Ile
          115          120          125

```

```

Asn Thr Asp Thr Ile Cys Glu Met Ala Tyr Ala His Ile Glu Trp Asp
          130          135          140

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```

Met Ile Val Cys Ala Ala Tyr Ala His Glu Leu Pro Lys Tyr Gly Val
145           150          155          160

```

Lys Val Gly Leu Thr Asn Asp Ala Ala Ala Cys Cys Thr Gly Leu Leu
 165 170 175

Leu Ala Cys Arg Leu Leu Ser Arg Phe Gly Met Asp Lys Ile Tyr Lys
 180 185 190

Gly Gln Val Glu Val Thr Arg Asp Glu Tyr Asn Val Gly Ser Thr Asp
 195 200 205

Gly Gln Pro Gly Ala Phe Thr Cys Cys Leu Asp Ala Gly Leu Ala Arg
 210 215 220

Thr Thr Thr Asp Asn Lys Val Phe Gly Ala Leu Arg Val Leu Trp Met
 225 230 235 240

Glu Val Ser Leu Ser Leu Thr Val Pro Asn Asp Ser Leu Ser Lys Gly
 245 250 255

Lys Pro Gly Pro Arg Lys Glu Gln Leu Pro Ala Arg Gly Ser Leu Ser
 260 265 270

Arg Gly Val Leu Gly Ala Phe Glu Val Gly Ser Gln Gly Val Glu Ala
 275 280 285

Ala Ala Ser Pro Asn Gly Gln Tyr Gly Pro Ser Trp Gly Leu Ala Ala
 290 295 300

Glu Gly Thr Glu Gly Ala Arg Pro Gln Ala Pro Lys Arg Asp Leu Ser
 305 310 315 320

Tyr Ser Arg Thr Asp Ser His Arg Asp Cys Ser Pro Val Cys His Asn
 325 330 335

Met Ser Leu Arg Gly His Leu Val Pro Lys Lys Pro Ser Lys Glu Lys
 340 345 350

Gln Gly Gln Gln Lys Leu Asp Ser Lys Phe Tyr Glu Ser Trp Ala Thr
 355 360 365

Ala Leu Leu Thr Ala Ile Phe Pro Val Leu Gly Ile Leu Val Leu Val
 370 375 380

Glu Ser Leu Leu Met Asn Asp Pro Met Arg Glu Cys Ile Leu Ser Thr
 385 390 395 400

Ser Gly Phe Ser Gly Pro Arg Ala Arg Leu Leu Gly Val Leu Ala Leu
 405 410 415

Gly Gly Leu Pro Leu His Leu Gly Ala Pro Val Ile Val Met Ala Trp
 420 425 430

Ile Val Leu Ala Leu Leu Phe Thr Arg Ser Arg Thr Arg Ala Asp Pro
 435 440 445

Ala Asp Val Leu Pro Pro Gly Ala Phe Glu Lys Thr Arg Met His Ala
 450 455 460

Leu Pro Pro Pro Leu Gly Leu Thr Leu Asp Asp Gly Glu Val Ile Thr
 465 470 475 480

Thr Arg Leu Leu Thr Asp Ala Ser Val Gln Lys Val Val Val Arg Ile
 485 490 495

Ser Glu Ser Ser Ser Cys Leu His Asn Gly Leu Leu Ser Gly Asn Gly
 500 505 510

Cys Glu Val His Tyr Arg Arg Ala Arg Leu Phe Gln Asp Ala Gln Met
 515 520 525

Pro Ala Gln Ser Pro Ala Tyr Arg Gly Asp Leu Arg Ala Pro Val Asn
 530 535 540

Ala Leu Arg Ile Gln Asn Arg Ser Gln Leu Ser Pro Gly Gly Lys Ile
 545 550 555 560

Lys Trp Arg Gln His Arg Gln Leu Glu Gly Thr His Arg Lys Lys Ser
 565 570 575

Ser Thr Met Phe Arg Lys Ile His Ser Ile Phe Asn Ser Ser Pro Gln
 580 585 590

Arg Lys Thr Ala Ala Glu Ser Pro Phe Tyr Glu Gly Ala Ser Pro Ala
 595 600 605

Val Lys Leu Ile Arg Ser Ser Ser Met Tyr Val Val Gly Asp His Gly
 610 615 620

Glu Lys Phe Ser Glu Ser Leu Lys Lys Tyr Lys Ser Thr Ser Ser Met
 625 630 635 640

Asp Thr Ser Leu Tyr Tyr Leu Arg Gln Glu Glu Asp Arg Ala Trp Met
 645 650 655

Tyr Ser Arg Thr Gln Asp Cys Leu Gln Tyr Leu Gln Glu Leu Leu Ala

660					665					670					
Leu	Arg	Lys	Lys	Tyr	Leu	Ser	Ser	Phe	Ser	Asp	Leu	Lys	Pro	His	Arg
		675					680					685			
Thr	Gln	Gly	Ile	Ser	Ser	Thr	Ser	Ser	Lys	Ser	Ser	Lys	Gly	Gly	Lys
		690					695					700			
Lys	Thr	Pro	Val	Arg	Ser	Thr	Pro	Lys	Glu	Ile	Lys	Lys	Ala	Thr	Pro
		705					710					715			720
Lys	Lys	Tyr	Ser	Gln	Phe	Ser	Ala	Asp	Val	Ala	Glu	Ala	Ile	Ala	Phe
				725					730					735	
Phe	Asp	Ser	Ile	Ile	Ala	Glu	Leu	Asp	Thr	Glu	Arg	Arg	Pro	Arg	Ala
			740					745					750		
Ala	Glu	Ala	Ser	Leu	Pro	Asn	Glu	Asp	Val	Asp	Phe	Asp	Val	Ala	Thr
		755						760				765			
Ser	Ser	Arg	Glu	His	Ser	Leu	His	Ser	Asn	Trp	Ile	Leu	Arg	Ala	Pro
		770					775					780			
Arg	Arg	His	Ser	Glu	Asp	Ile	Ala	Ala	His	Thr	Val	His	Thr	Val	Asp
		785					790					795			800
Gly	Gln	Phe	Arg	Arg	Ser	Thr	Glu	His	Arg	Thr	Val	Gly	Thr	Gln	Arg
				805					810					815	
Arg	Leu	Glu	Arg	His	Pro	Ile	Tyr	Leu	Pro	Lys	Ala	Val	Glu	Gly	Ala
			820					825					830		
Phe	Asn	Thr	Trp	Lys	Phe	Lys	Pro	Lys	Ala	Cys	Lys	Lys	Asp	Leu	Gly
		835					840					845			
Ser	Ser	Arg	Gln	Ile	Leu	Phe	Asn	Phe	Ser	Gly	Glu	Asp	Met	Glu	Trp
		850					855					860			
Asp	Ala	Glu	Leu	Phe	Ala	Leu	Glu	Pro	Gln	Leu	Ser	Pro	Gly	Glu	Asp
		865					870					875			880
Tyr	Tyr	Glu	Thr	Glu	Asn	Pro	Lys	Gly	Gln	Trp	Leu	Leu	Arg	Glu	Arg
				885					890					895	
Leu	Trp	Glu	Arg	Thr	Thr	Gly	Ser	Leu	Arg	Ser	Cys	Pro	Leu	Ser	Ala
			900					905					910		

Gln His Glu Val Phe Gly Arg Val Glu Asn Ala Asn Cys Asn Thr Val
 915 920 925

Asn Pro Leu Ser Thr Leu Pro Ala Gly Ala Val Pro Val Pro Asn Arg
 930 935 940

Pro Val Ala Ser Gln Gly Thr Gly Leu Arg Thr Leu Ser Glu Leu Glu
 945 950 955 960

Phe Leu Cys Val Gly
 965

<210> 193
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 193
 cgagaggcac cccatttatt tg 22

<210> 194
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 194
 ttctctgtct catagtagtc ctcccc 26

<210> 195
 <211> 1363
 <212> DNA
 <213> Homo sapiens

<400> 195
 aacaggcccc atgctgctct ggacggctgt gctgctcttt ggtaagtcaa cgagcatggg 60
 catccccctct tggagcacta aggaccttcc ctgtgttggg aaaactgtct ggctgtacct 120
 ccaagcctgg ccaaaccctg tgtttgaagg agatgcctg actctgcat gtcagggatg 180
 gaagaataca cactgtctc aggtgaagtt ctacagagat ggaaaattcc ttcatttctc 240
 taaggaaaac cagactctgt ccatgggagc agcaacagt cagagccgtg gccagtacag 300
 ctgctctggg caggtgatgt atattccaca gacattcaca caaacttcag agactgccat 360
 ggttcaagtc caagagctgt ttccacctcc tgtgctgagt gccatccct ctctgagcc 420
 ccgagagggt agcctggtga ccctgagatg tcagacaaag ctgcaccccc tgaggtcagc 480

```

cttgaggctc cttttctcct tccacaagga cggccacacc ttgcaggaca ggggccctca    540
cccagaacte tgcattcccg gagccaagga gggagactct gggctttact ggtgtgaggt    600
ggccccctgag ggtggccagg tccagaagca gagccccag ctggagggtca gagtgcaggc    660
tctgttatcc cgtcctgtgc tctctctgca ccacgggcct gctgaccctg ctgtggggga    720
catggtgcag ctctctgtg aggcacagag gggctcccct ccgattcctgt attccttcta    780
ccttgatgag aagattgtgg ggaaccactc agctccctgt ggtggaacca cctccctcct    840
cttcccagtg aagtccagaac aggatgctgg gaactactcc tgcgaggctg agaacagtgt    900
ctccagagag aggagtgagc ccaagaagct gtctctgaag ggttctcaag tcttggtcac    960
tcccgccagc aactggctgg ttcttggtt tctgtcgagc ctgcttggcc tgatgggttat   1020
tgctgctgca cttctgggtt atgtgagatc ctggagaaaa gctgggcccc ttccatccca   1080
gataccaccc acagctccag gtggagagca gtgccacta tatgccaacg tgcattacca   1140
gaaagggaaa gatgaaggtg ttgtctactc tgtggtgcat agaacctcaa agaggagtga   1200
agccaggtct gctgagttca ccgtggggag aaagcacaaa gcttcaccca aattccaccc   1260
caccctggat ctccacacca agcggctcag ggttaatggt cgagttcagg aagcttatgt   1320
ggccttggtc aacacctgct ccttcacccc cagcctgaag tga                      1363

```

```

<210> 196
<211> 450
<212> PRT
<213> Homo sapiens

```

```
<400> 196
```

```
Met Leu Leu Trp Thr Ala Val Leu Leu Phe Gly Lys Ser Thr Ser Met
1              5              10              15

```

```
Gly Ile Pro Ser Trp Ser Thr Lys Asp Leu Pro Cys Val Gly Lys Thr
20              25              30

```

```
Val Trp Leu Tyr Leu Gln Ala Trp Pro Asn Pro Val Phe Glu Gly Asp
35              40              45

```

```
Ala Leu Thr Leu Arg Cys Gln Gly Trp Lys Asn Thr Pro Leu Ser Gln
50              55              60

```

```
Val Lys Phe Tyr Arg Asp Gly Lys Phe Leu His Phe Ser Lys Glu Asn
65              70              75              80

```

```
Gln Thr Leu Ser Met Gly Ala Ala Thr Val Gln Ser Arg Gly Gln Tyr
85              90              95

```

Ser Cys Ser Gly Gln Val Met Tyr Ile Pro Gln Thr Phe Thr Gln Thr
 100 105 110

Ser Glu Thr Ala Met Val Gln Val Gln Glu Leu Phe Pro Pro Pro Val
 115 120 125

Leu Ser Ala Ile Pro Ser Pro Glu Pro Arg Glu Gly Ser Leu Val Thr
 130 135 140

Leu Arg Cys Gln Thr Lys Leu His Pro Leu Arg Ser Ala Leu Arg Leu
 145 150 155 160

Leu Phe Ser Phe His Lys Asp Gly His Thr Leu Gln Asp Arg Gly Pro
 165 170 175

His Pro Glu Leu Cys Ile Pro Gly Ala Lys Glu Gly Asp Ser Gly Leu
 180 185 190

Tyr Trp Cys Glu Val Ala Pro Glu Gly Gly Gln Val Gln Lys Gln Ser
 195 200 205

Pro Gln Leu Glu Val Arg Val Gln Ala Pro Val Ser Arg Pro Val Leu
 210 215 220

Thr Leu His His Gly Pro Ala Asp Pro Ala Val Gly Asp Met Val Gln
 225 230 235 240

Leu Leu Cys Glu Ala Gln Arg Gly Ser Pro Pro Ile Leu Tyr Ser Phe
 245 250 255

Tyr Leu Asp Glu Lys Ile Val Gly Asn His Ser Ala Pro Cys Gly Gly
 260 265 270

Thr Thr Ser Leu Leu Phe Pro Val Lys Ser Glu Gln Asp Ala Gly Asn
 275 280 285

Tyr Ser Cys Glu Ala Glu Asn Ser Val Ser Arg Glu Arg Ser Glu Pro
 290 295 300

Lys Lys Leu Ser Leu Lys Gly Ser Gln Val Leu Phe Thr Pro Ala Ser
 305 310 315 320

Asn Trp Leu Val Pro Trp Leu Pro Ala Ser Leu Leu Gly Leu Met Val
 325 330 335

Ile Ala Ala Ala Leu Leu Val Tyr Val Arg Ser Trp Arg Lys Ala Gly
 340 345 350

Pro Leu Pro Ser Gln Ile Pro Pro Thr Ala Pro Gly Gly Glu Gln Cys
 355 360 365

Pro Leu Tyr Ala Asn Val His His Gln Lys Gly Lys Asp Glu Gly Val
 370 375 380

Val Tyr Ser Val Val His Arg Thr Ser Lys Arg Ser Glu Ala Arg Ser
 385 390 395 400

Ala Glu Phe Thr Val Gly Arg Lys His Lys Ala Ser Pro Lys Phe His
 405 410 415

Pro Thr Leu Asp Leu His Thr Lys Arg Leu Arg Val Asn Gly Arg Val
 420 425 430

Gln Glu Ala Tyr Val Ala Leu Val Asn Thr Cys Ser Leu Thr Pro Ser
 435 440 445

Leu Lys
 450

<210> 197
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 197
 gtcagggatg gaagaatac 19

<210> 198
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 198
 acaggaggtg gaaacagc 18

<210> 199
 <211> 534
 <212> DNA
 <213> Homo sapiens

<400> 199
 acaattgtgt cttcttccag atgtcatcgc tataaggagt ggggctttca tcacctcctt 60

gacgtaggat gtgtacatgg ctctccaggt cagagttgct ccaagcaagg ttgttttgca 120

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gaagtttctt ctatgtgtca ttcttttcta cactgtgtac tatgtgtccc tgagcatggg      180
ctgcgtgatg ttgaggtgc atgagttgaa tgtcctggct ccatttgatt tcaaaacaaa      240
tccctcatgg ctcaacataa actataaagt tcttttagtt tcaacagagg tcacctactt      300
tgtttgtgga ttgttttttg ttccagttgt ggaagaatgg gtttgggatt atgctatttc      360
agtcactatt cttcatgttg ccatcacttc aactggtatg ttggaattcc ccttgacatc      420
acattggtgg gctgcttttag gtatatcaaa attgcttggt tagattctct aatgcacaga      480
aataatgtta aatagaataa ctgtggaaat atattttatt ttctcataga tttt          534

```

```

<210> 200
<211> 128
<212> PRT
<213> Homo sapiens

```

```

<400> 200

```

```

Met Ala Leu Gln Val Arg Val Ala Pro Ser Lys Val Val Leu Gln Lys
1              5              10              15

```

```

Phe Leu Leu Cys Val Ile Leu Phe Tyr Thr Val Tyr Tyr Val Ser Leu
20              25              30

```

```

Ser Met Gly Cys Val Met Phe Glu Val His Glu Leu Asn Val Leu Ala
35              40              45

```

```

Pro Phe Asp Phe Lys Thr Asn Pro Ser Trp Leu Asn Ile Asn Tyr Lys
50              55              60

```

```

Val Leu Leu Val Ser Thr Glu Val Thr Tyr Phe Val Cys Gly Leu Phe
65              70              75              80

```

```

Phe Val Pro Val Val Glu Glu Trp Val Trp Asp Tyr Ala Ile Ser Val
85              90              95

```

```

Thr Ile Leu His Val Ala Ile Thr Ser Thr Val Met Leu Glu Phe Pro
100              105              110

```

```

Leu Thr Ser His Trp Trp Ala Ala Leu Gly Ile Ser Lys Leu Leu Val
115              120              125

```

```

<210> 201
<211> 20
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> Oligonucleotide

```

<400> 201
tcaaacaatca cgcagcccat 20

<210> 202
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide

<400> 202
tggggctttc atcacctcct tg 22

<210> 203
<211> 615
<212> DNA
<213> Homo sapiens

<400> 203
ggggatgtga tgtcaggctt gattgtgggc atattattgg tgccccagtc cattgcttat 60
tccctgctgg ctggccaaga acctgtctat ggtctgtaca catctttttt tgccagcatc 120
atattatttc tcttgggtac ctcccgtcac atctctgtgg gcatttttgg agtactgtgc 180
cttatgattg gtgagacagt tgaccgagaa ctacagaaag ctggctatga caatgcccat 240
agtgtctcctt ccttaggaat ggtttcaaat gggagcacat tattaaatca tacatcagac 300
aggatatgtg acaaaagttg ctatgcaatt atggttggca gcactgtaac ctttatagct 360
ggagtttatc agtgattggt ttgttaatgt ggaagcaaca ttttctatga ttaatctgct 420
gttacctggt ttgactgagc tactacaaaa agaaaaatca ctgaattgct atgggtttct 480
gaaatatcca aaaaattaac ctgaagcagg gggaaaaatg acatcacacc attagcaggt 540
attgtgtgaa acttctaaaa atgaaactga catttatctg acttattagg aataaatact 600
ctctaataa ctctc 615

<210> 204
<211> 121
<212> PRT
<213> Homo sapiens

<400> 204
Met Ser Gly Leu Ile Val Gly Ile Leu Leu Val Pro Gln Ser Ile Ala
1 5 10 15
Tyr Ser Leu Leu Ala Gly Gln Glu Pro Val Tyr Gly Leu Tyr Thr Ser
20 25 30
Phe Phe Ala Ser Ile Ile Tyr Phe Leu Leu Gly Thr Ser Arg His Ile
35 40 45

Ser Val Gly Ile Phe Gly Val Leu Cys Leu Met Ile Gly Glu Thr Val
 50 55 60

Asp Arg Glu Leu Gln Lys Ala Gly Tyr Asp Asn Ala His Ser Ala Pro
 65 70 75 80

Ser Leu Gly Met Val Ser Asn Gly Ser Thr Leu Leu Asn His Thr Ser
 85 90 95

Asp Arg Ile Cys Asp Lys Ser Cys Tyr Ala Ile Met Val Gly Ser Thr
 100 105 110

Val Thr Phe Ile Ala Gly Val Tyr Gln
 115 120

<210> 205
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 205
 taaatcatac atcagacagg 20

<210> 206
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 206
 aaaacaggta acagcagatt 20

<210> 207
 <211> 513
 <212> DNA
 <213> Homo sapiens

<400> 207
 atggcgggcg cgcgtctcgc gagaattcgg ccgcgcgggc tccaagcccg gcgcctggcg 60
 tcggaggggaa agactcgagc cgaaagcccc atctctgacc ctagcaactc atacccttct 120
 ggcttcctt tagcaaagcg cctggacgctc atccccctt cagatacccc aggccctcgtc 180
 ctggccactg gcttgactat tgcaggagag cctgataaga tgggacacgg ctccaccttg 240
 cattcagcaa gtcgttatcc tgcaactacg atgcaccagg aagaggatgt ggtgaggcca 300
 gcttttccat atgcagttag gcatcgaagg gaagatctgc tgtacctaag tgggggtgggc 360

```

atttcatttt tagggaccgt ctttggttaa ataatttggg acctcataaa gcctccagcc 420
attcctgatac aggacatagc ttacaacagc agcctgggtgc ccataacctg gacagcctgg 480
agtgaagtca cactcccaga cttgatgttc taa 513

```

```

<210> 208
<211> 170
<212> PRT
<213> Homo sapiens

```

```

<400> 208

```

```

Met Ala Ala Ala Ala Leu Ala Arg Ile Arg Pro Val Gly Leu Gln Ala
1          5          10          15

```

```

Arg Arg Leu Ala Ser Glu Gly Lys Thr Arg Ala Glu Ser Pro Ile Ser
20          25          30

```

```

Asp Pro Ser Asn Ser Tyr Pro Ser Gly Phe Pro Leu Ala Lys Arg Leu
35          40          45

```

```

Asp Val Ile Pro Ser Ser Asp Thr Pro Gly Leu Val Leu Ala Thr Gly
50          55          60

```

```

Leu Thr Ile Ala Gly Glu Pro Asp Lys Met Gly His Gly Ser Thr Leu
65          70          75          80

```

```

His Ser Ala Ser Arg Tyr Pro Ala Thr Thr Met His Gln Glu Glu Asp
85          90          95

```

```

Val Val Arg Pro Ala Phe Pro Tyr Ala Val Arg His Arg Arg Glu Asp
100         105         110

```

```

Leu Leu Tyr Leu Ser Gly Val Gly Ile Ser Phe Leu Gly Thr Val Phe
115         120         125

```

```

Val Lys Ile Ile Trp Asp Leu Ile Lys Pro Pro Ala Ile Pro Asp Gln
130         135         140

```

```

Asp Ile Ala Tyr Asn Ser Ser Leu Val Pro Ile Thr Trp Thr Ala Trp
145         150         155         160

```

```

Ser Glu Val Thr Leu Pro Asp Leu Met Phe
165         170

```

```

<210> 209
<211> 20
<212> DNA
<213> Artificial Sequence

```

<220>

<223> Oligonucleotide

<400> 209

tgagccctag atatacttgg 20

<210> 210

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide

<400> 210

cagtcagcct ccatttct 18

<210> 211

<211> 508

<212> DNA

<213> Homo sapiens

<400> 211

tgagccctag atatacttgg cttgcattta ggggccatga tgtttagaga tgaataatgc 60

cttacatgct ggagtcaccc tcagtttgct aaagtgttca cactgtgaga ggctcacaga 120

aatggaggct gactgaagga agagcagatt cacatctttc atcccttctt tatgctcatg 180

cttctaattt ttgttcccat gttttcttgc cctcctctt cttagcattt attttgtctg 240

tttctctttc cctccttctg gctccctctc catctctcct gagcacagaa atgcggtac 300

tgtatttaaat ccacagtggc cccctctggc cccctctttg tgtctcctga gcacaggecc 360

tggccccctc tccatctctc ctgacctcct gatccgcca cctcgccag ttattgctgt 420

tttataagga aaatgttttc tagtaccaca cttgtctccc tggaagggat agaagaagga 480

gggaaggaag tagggaggca gggaagag 508

<210> 212

<211> 97

<212> PRT

<213> Homo sapiens

<400> 212

Met Pro Tyr Met Leu Glu Ser Pro Ser Val Cys Gln Ser Val His Thr
1 5 10 15Val Arg Gly Ser Gln Lys Trp Arg Leu Thr Glu Gly Arg Ala Asp Ser
20 25 30His Leu Ser Ser Leu Leu Tyr Ala His Ala Ser Asn Phe Cys Ser His
35 40 45

Val Phe Leu Pro Leu Leu Phe Leu Ala Phe Ile Leu Ser Val Ser Leu
 50 55 60

Ser Pro Leu Leu Ala Pro Ser Pro Ser Leu Leu Ser Thr Glu Met Arg
 65 70 75 80

Leu Leu Tyr Leu Ile His Ser Gly Pro Leu Trp Pro Pro Leu Cys Val
 85 90 95

Ser

<210> 213
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 213
 ctgtatttaa tccacagtgg ccccc 25

<210> 214
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 214
 tccctacttc cttccctcct tcttcta 27

<210> 215
 <211> 1321
 <212> DNA
 <213> Homo sapiens

<400> 215
 cagtgccag gcaagcccag gagttgacat ttctctgccc agccatgggc ctcaccctgc 60
 tcttgctgct gctcctggga ctagaaggtc agggcatagt tggcagcctc cctgaggtgc 120
 tgcaggcacc cgtgggaagc tccattctgg tgcagtgcc ctacaggctc caggatgtca 180
 aagctcagaa ggtgtggtgc cggttcttgc cggaggggtg ccagcccctg gtgtcctcag 240
 ctgtggatcg cagagctcca gcgggcaggc gtacgtttct cacagacctg ggtggggggc 300
 tgctgcaggt ggaaatggtt accctgcagg aagaggatgc tggcgagtat ggctgcatgg 360
 tggatggggc cagggggccc cagattttgc acagagtctc tctgaacata ctgccccag 420
 aggaagaaga agagacccat aagattggca gtctggctga gaacgcattc tcagaccctg 480

```

caggcagtgc caaccctttg gaaccagcc aggatgagaa gagcatcccc ttgatctggg 540
gtgctgtgct cctggtaggt ctgctggtgg cagcgggtgg gctgtttgct gtgatggcca 600
agaggaaaca agggaacagg cttggtgtct gtggccgatt cctgagcagc agagtttcag 660
gcatgaatcc ctctcagtg gtccaccacg tcagtgactc tggaccggct gctgaattgc 720
ctttggatgt accacacatt aggcttgact caccaccttc atttgacaat accacctaca 780
ccagcctacc tcttgattcc ccatcaggaa aaccttcact ccagctcca tctcattgc 840
cccctctacc tcttaagggt ctggtctgct ccaagcctgt gacatatgcc acagtaatct 900
tcccgggagg gaacaagggt ggagggacct cgtgtggggc agcccagaat ccacctaaca 960
atcagactcc atccagctaa gctgctcatc acactttaaa ctcatgagga ccatccctag 1020
gggttctgtg catccatcca gccagctcat gccctaggat ccttaggata tctgagcaac 1080
cagggacttt aagatctaata ccaatgtcct aactttacta gggaaagtga cgctcagaca 1140
tgactgagat gtcttgggga agacctccct gcacccaact cccccactgg ttcttctacc 1200
attacacact gggctaaata aaccctaata atgatgtgca aactcttaata ggctgaatgg 1260
gaaaggaaac tgcccaagtt tgactaattg cttggcctgt gaatggaaaa gactctggtc 1320
t 1321

```

```

<210> 216
<211> 311
<212> PRT
<213> Homo sapiens

```

```
<400> 216
```

```

Met Gly Leu Thr Leu Leu Leu Leu Leu Leu Gly Leu Glu Gly Gln
1           5           10           15

```

```

Gly Ile Val Gly Ser Leu Pro Glu Val Leu Gln Ala Pro Val Gly Ser
20           25           30

```

```

Ser Ile Leu Val Gln Cys His Tyr Arg Leu Gln Asp Val Lys Ala Gln
35           40           45

```

```

Lys Val Trp Cys Arg Phe Leu Pro Glu Gly Cys Gln Pro Leu Val Ser
50           55           60

```

```

Ser Ala Val Asp Arg Arg Ala Pro Ala Gly Arg Arg Thr Phe Leu Thr
65           70           75           80

```

```

Asp Leu Gly Gly Gly Leu Leu Gln Val Glu Met Val Thr Leu Gln Glu
85           90           95

```


Glu Asp Ala Gly Glu Tyr Gly Cys Met Val Asp Gly Ala Arg Gly Pro
 100 105 110

Gln Ile Leu His Arg Val Ser Leu Asn Ile Leu Pro Pro Glu Glu Glu
 115 120 125

Glu Glu Thr His Lys Ile Gly Ser Leu Ala Glu Asn Ala Phe Ser Asp
 130 135 140

Pro Ala Gly Ser Ala Asn Pro Leu Glu Pro Ser Gln Asp Glu Lys Ser
 145 150 155 160

Ile Pro Leu Ile Trp Gly Ala Val Leu Leu Val Gly Leu Leu Val Ala
 165 170 175

Ala Val Val Leu Phe Ala Val Met Ala Lys Arg Lys Gln Gly Asn Arg
 180 185 190

Leu Gly Val Cys Gly Arg Phe Leu Ser Ser Arg Val Ser Gly Met Asn
 195 200 205

Pro Ser Ser Val Val His His Val Ser Asp Ser Gly Pro Ala Ala Glu
 210 215 220

Leu Pro Leu Asp Val Pro His Ile Arg Leu Asp Ser Pro Pro Ser Phe
 225 230 235 240

Asp Asn Thr Thr Tyr Thr Ser Leu Pro Leu Asp Ser Pro Ser Gly Lys
 245 250 255

Pro Ser Leu Pro Ala Pro Ser Ser Leu Pro Pro Leu Pro Pro Lys Val
 260 265 270

Leu Val Cys Ser Lys Pro Val Thr Tyr Ala Thr Val Ile Phe Pro Gly
 275 280 285

Gly Asn Lys Gly Gly Gly Thr Ser Cys Gly Pro Ala Gln Asn Pro Pro
 290 295 300

Asn Asn Gln Thr Pro Ser Ser
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<210> 217

<211> 18

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<213> Artificial Sequence

<220>

<223> Oligonucleotide

<400> 217

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18

<210> 218

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<400> 218

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18

<210> 219

<211> 3874

<212> DNA

<213> Homo sapiens

<400> 219

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tacctagctg gctacctggg gctcagcata acctggttgc tgctcggcgc cctgctgtgg 420

atgtggtggc gcaggaaccg ccgcgggaag cttgggcgcc tggccgcgc cttcgaattc 480

cttgacaatg aacgcgagtt catcagccgc gagctgcggg gccagcacct gccagcctgg 540

atccacttcc cggacgtgga gcgggtcgag tgggccaaca agatcatctc tcagacctgg 600

ccctacctaa gcatgatcat ggaaagcaag ttccgggaga aacttgagcc caagatccga 660

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cccagggtca acggtgtcaa ggcacacact aatacgtgca accgaagacg tgtgactgtg 780

gacctgcaga tctgctacat cggggactgt gagatcagtg tggagctgca gaagattcag 840

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<210> 220
<211> 501
<212> PRT
<213> Homo sapiens

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<400> 220
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Met Arg Ala Glu Glu Pro Cys Ala Pro Gly Ala Pro Ser Ala Leu Gly
1           5           10           15

```

```

Ala Gln Arg Thr Pro Gly Pro Glu Leu Arg Leu Ser Ser Gln Leu Leu
20           25           30

```

```

Pro Glu Leu Cys Thr Phe Val Val Arg Val Leu Phe Tyr Leu Gly Pro
35           40           45

```

```

Val Tyr Leu Ala Gly Tyr Leu Gly Leu Ser Ile Thr Trp Leu Leu Leu
50           55           60

```

```

Gly Ala Leu Leu Trp Met Trp Trp Arg Arg Asn Arg Arg Gly Lys Leu
65           70           75           80

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Gly Arg Leu Ala Ala Ala Phe Glu Phe Leu Asp Asn Glu Arg Glu Phe
85           90           95

```

Ile	Ser	Arg	Glu	Leu	Arg	Gly	Gln	His	Leu	Pro	Ala	Trp	Ile	His	Phe	100	105	110
Pro	Asp	Val	Glu	Arg	Val	Glu	Trp	Ala	Asn	Lys	Ile	Ile	Ser	Gln	Thr	115	120	125
Trp	Pro	Tyr	Leu	Ser	Met	Ile	Met	Glu	Ser	Lys	Phe	Arg	Glu	Lys	Leu	130	135	140
Glu	Pro	Lys	Ile	Arg	Glu	Lys	Ser	Ile	His	Leu	Arg	Thr	Phe	Thr	Phe	145	150	155
Thr	Lys	Leu	Tyr	Phe	Gly	Gln	Lys	Cys	Pro	Arg	Val	Asn	Gly	Val	Lys	165	170	175
Ala	His	Thr	Asn	Thr	Cys	Asn	Arg	Arg	Arg	Val	Thr	Val	Asp	Leu	Gln	180	185	190
Ile	Cys	Tyr	Ile	Gly	Asp	Cys	Glu	Ile	Ser	Val	Glu	Leu	Gln	Lys	Ile	195	200	205
Gln	Ala	Gly	Val	Asn	Gly	Ile	Gln	Leu	Gln	Gly	Thr	Leu	Arg	Val	Ile	210	215	220
Leu	Glu	Pro	Leu	Leu	Val	Asp	Lys	Pro	Phe	Val	Gly	Ala	Val	Thr	Val	225	230	235
Phe	Phe	Leu	Gln	Lys	Gln	His	Leu	Gln	Ile	Asn	Trp	Thr	Gly	Leu	Thr	245	250	255
Asn	Leu	Leu	Asp	Ala	Pro	Gly	Ile	Asn	Asp	Val	Ser	Asp	Ser	Leu	Leu	260	265	270
Glu	Asp	Leu	Ile	Ala	Thr	His	Leu	Val	Leu	Pro	Asn	Arg	Val	Thr	Val	275	280	285
Pro	Val	Lys	Lys	Gly	Leu	Asp	Leu	Thr	Asn	Leu	Arg	Phe	Pro	Leu	Pro	290	295	300
Cys	Gly	Val	Ile	Arg	Val	His	Leu	Leu	Glu	Ala	Glu	Gln	Leu	Ala	Gln	305	310	315
Lys	Asp	Asn	Phe	Leu	Gly	Leu	Arg	Gly	Lys	Ser	Asp	Pro	Tyr	Ala	Lys	325	330	335
Val	Ser	Ile	Gly	Leu	Gln	His	Phe	Arg	Ser	Arg	Thr	Ile	Tyr	Arg	Asn	340	345	350

Leu Asn Pro Thr Trp Asn Glu Val Phe Glu Phe Met Val Tyr Glu Val
 355 360 365

Pro Gly Gln Asp Leu Glu Val Asp Leu Tyr Asp Glu Asp Thr Asp Arg
 370 375 380

Asp Asp Phe Leu Gly Ser Leu Gln Ile Cys Leu Gly Asp Val Met Thr
 385 390 395 400

Asn Arg Val Val Asp Glu Trp Phe Val Leu Asn Asp Thr Thr Ser Gly
 405 410 415

Arg Leu His Leu Arg Leu Glu Trp Leu Ser Leu Leu Thr Asp Gln Glu
 420 425 430

Val Leu Thr Glu Asp His Gly Gly Leu Ser Thr Ala Ile Leu Val Val
 435 440 445

Phe Leu Glu Ser Ala Cys Asn Leu Pro Arg Asn Pro Phe Asp Tyr Leu
 450 455 460

Asn Gly Glu Tyr Arg Ala Lys Lys Leu Ser Arg Phe Ala Arg Val Lys
 465 470 475 480

Gln Gly Gln Gln Arg Pro Phe Phe Leu Cys Gln Thr Ile Cys Arg Gln
 485 490 495

Glu Asp Thr Tyr Lys
 500

<210> 221
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 221
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20

<210> 222
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 222

tcttggtggc ccactcgac

19

<210> 223
 <211> 1020
 <212> DNA
 <213> Homo sapiens

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 gctaatagaga aaaatggcaa ttattataaa gatataaaac aatatgtgtt cacaacacaa 300
 aatccaaatg gcactgagtc tgaaatatct gtgagagcca caactgacct gaattttgct 360
 ctaaaaaacg ataaaactgt caatgcaact acatatgaaa aatccaccat tgaagaagaa 420
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<210> 224
 <211> 294
 <212> PRT
 <213> Homo sapiens

<400> 224

Met Asn Phe Ile Leu Phe Ile Phe Ile Pro Gly Val Phe Ser Leu Lys
 1 5 10 15

Ser Ser Thr Leu Lys Pro Thr Ile Glu Ala Leu Pro Asn Val Leu Pro
 20 25 30

Leu Asn Glu Asp Val Asn Lys Gln Glu Glu Lys Asn Glu Asp His Thr
 35 40 45

Pro Asn Tyr Ala Pro Ala Asn Glu Lys Asn Gly Asn Tyr Tyr Lys Asp
 50 55 60

Ile Lys Gln Tyr Val Phe Thr Thr Gln Asn Pro Asn Gly Thr Glu Ser
 65 70 75 80

Glu Ile Ser Val Arg Ala Thr Thr Asp Leu Asn Phe Ala Leu Lys Asn
 85 90 95

Asp Lys Thr Val Asn Ala Thr Thr Tyr Glu Lys Ser Thr Ile Glu Glu
 100 105 110

Glu Thr Thr Thr Ser Glu Pro Ser His Lys Asn Ile Gln Arg Ser Thr
 115 120 125

Pro Asn Val Pro Ala Phe Trp Thr Met Leu Ala Lys Ala Ile Asn Gly
 130 135 140

Thr Ala Val Val Met Asp Asp Lys Asp Gln Leu Phe His Pro Ile Pro
 145 150 155 160

Glu Ser Asp Val Asn Ala Thr Gln Gly Glu Asn Gln Pro Asp Leu Glu
 165 170 175

Asp Leu Lys Ile Lys Ile Met Leu Gly Ile Ser Leu Met Thr Leu Leu
 180 185 190

Leu Phe Val Val Leu Leu Ala Phe Cys Ser Ala Thr Leu Tyr Lys Leu
 195 200 205

Arg His Leu Ser Tyr Lys Ser Cys Glu Ser Gln Tyr Ser Val Asn Pro
 210 215 220

Glu Leu Ala Thr Met Ser Tyr Phe His Pro Ser Glu Gly Val Ser Asp
 225 230 235 240

Thr Ser Phe Ser Lys Ser Ala Glu Ser Ser Thr Phe Leu Gly Thr Thr
 245 250 255

Ser Ser Asp Met Arg Arg Ser Gly Thr Arg Thr Ser Glu Ser Lys Ile
 260 265 270

Met Thr Asp Ile Ile Ser Ile Gly Ser Asp Asn Glu Met His Glu Asn
 275 280 285

Asp Glu Ser Val Thr Arg
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<210> 225
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 225
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<210> 226
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 226
 tgaaagtaag acatcgtggc c 21

<210> 227
 <211> 309
 <212> DNA
 <213> Homo sapiens

<400> 227
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 aggcgggaac tagagcccaa gggccccaag ccaaccgccc cttctgccgt gggcccaaac 240
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 acgcgatga 309

<210> 228
 <211> 102
 <212> PRT
 <213> Homo sapiens

<400> 228

Met Thr Thr Ala Thr Pro Leu Gly Asp Thr Thr Phe Phe Ser Leu Asn
 1 5 10 15

Met Thr Thr Arg Gly Glu Asp Phe Leu Tyr Lys Ser Ser Gly Ala Ile
 20 25 30

Val Ala Ala Val Val Val Val Val Ile Ile Ile Phe Thr Val Val Leu
 35 40 45

Ile Leu Leu Lys Met Tyr Asn Arg Lys Met Arg Thr Arg Arg Glu Leu
 50 55 60

Glu Pro Lys Gly Pro Lys Pro Thr Ala Pro Ser Ala Val Gly Pro Asn
 65 70 75 80

Ser Asn Gly Ser Gln His Pro Ala Thr Val Thr Phe Ser Pro Val Asp
 85 90 95

Val Gln Val Glu Thr Arg
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<210> 229
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 229
 ggggatacca ccttcttct 19

<210> 230
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 230
 agttgctggg tggttgct 18

<210> 231
 <211> 2510
 <212> DNA
 <213> Homo sapiens

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<210> 232
<211> 164
<212> PRT
<213> Homo sapiens

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<400> 232

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Met Gln Arg Lys Arg Val Ser Ser Thr Lys Ser Leu Cys Trp Asp Gly
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```

```

Arg Phe Gly Pro Cys Gly Ala Ser Gly Lys Phe Trp Leu Gln Arg Lys
20          25          30

```

```

Trp Arg Val Ser Gln Arg Arg Ser Lys Thr Lys Ser Gly Pro Val Leu
35          40          45

```

```

Gly His Leu Lys Ala Met Pro Lys His Ser Val Ile Leu Gly Val His
50          55          60

```

```

Trp Lys Ala Ser Ser Tyr Pro His Thr Ser Ser Gln Ser Pro Asp Val
65          70          75          80

```

```

Asn Val Glu Ala Glu Asp His Leu Leu Leu Val Leu Leu Leu Phe Leu
85          90          95

```

```

Leu Phe Leu Phe Arg Thr Ala Thr Ile Glu Asp Leu Ala Ser His Phe
100          105          110

```

```

Pro Asp Val Phe Ser Glu Ile Leu Cys Trp Pro Ala Lys Pro Tyr Gly
115          120          125

```

```

Phe Ile Leu Pro Leu Arg Ser Pro Ser Val Arg Ser Leu Phe Leu Lys
130          135          140

```

```

Asp Arg Val Gly Ser Arg Arg Gly Thr Glu Arg Thr Ser Ser Leu Ala
145          150          155          160

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Leu Gln Cys Ser

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<210> 233
<211> 20
<212> DNA
<213> Artificial Sequence

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<220>

<223> Oligonucleotide

<400> 233

gaggctgaga aaatgttaga

20

<210> 234

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide

<400> 234

tccatcccag caaagact

18

<210> 235

<211> 1977

<212> DNA

<213> Homo sapiens

<400> 235

cgtgggcttg aggacctgga gagagtagat cctgaagaac tttttcagtc tgctgaagag 60

cttggaagac tggagacaga aggcagagtc tcaggctctg aaggtataag gagtgtgagt 120

tcctgtgaga aacactcatt tgattgtgaa aagacttgaa ttctatgcta agcaggggttc 180

caagtagcta aatgaatgat ctgagcaagt ctctcttgct gctgctgcta ctcgtttaca 240

tttattgatt acttacgatg attcaggtac tgttgtaagt gctttacatg ctggtatacg 300

agactcttgg gagaaatcac tttaatgaag cttgagacac atggcattgc catgcaatga 360

tttttcccc ctcttcacgg gatcagaggg aactaataga atgtgacaat gattcttttag 420

cagggactgc tgaggcttct ggttcctttt taagatctgc agtgaaagaa gatgagaaac 480

atggatatgc ctttcttttg gtccccctct tcctttatct gatctctact tccttctata 540

aatatattag ggctacattg tccctttgta tttcaaaca ggcaaaaaga ggttgtaatt 600

acactttact gcaatcctca gtttctccag ggaacaggaa tgcaaaggct ttgaaggcct 660

ctctatttgc tgacatggc agctgggtgc catgggccaa gtccttctgt tgccctcttc 720

tgtcaccaag taagctaggt ctttcttgag gctcagggtt gctgtgatga tgatcacttt 780

taggcagaag gttagaggcc tcatgagtgc tatatggact ttattaggct ttagatttga 840

tggggaataa gggatgtgat ttgtcttttg ggaactcatc ttgattcat cattgtctct 900

tggtatcttg gaatttccat gtcattacag tctacagaat gaaagagtaa cctgtcccag 960

aggagaggca ggtgaaagac tccacagcat gctcattctc attctgtctt ctgagtgaca 1020

ccgaggttta ctgagtgcc actatgtgcc aagcactgtg ctgagggtt tctttgtatg 1080

catgatctca gtgaatctca ccaagcctca tctggaaaac ggggacaaat taacaacagg 1140

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atggcaaatt gaaaaacacg taaccatggt ctacagatgg aaaggggtgc ttggttatta 1200
tgaaggcccc ctgcgaagcg tgtgggacat ggggtgtgttc tctgggttgt actgatcaga 1260
tcaaggacct cccccaccct tctcacactc tgcccacttc cgccctttgc ttatcagacc 1320
cttagccagt gactcattcc agaaccagaa ccttggtgaa atctcaaccg acaccagaga 1380
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taaaataata aatgtatgta ggaatacgtg tgttgaaaga tgtacatcaa tttgctaaca 1860
atggttatct ctgacgtggg gggatttgag atgtgttttt ctttttggtt gtatttttct 1920
ctattgtttg acttaacaca gaacatgttt gggttacaaca ataaagttat tgaagac 1977

```

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<210> 236
<211> 130
<212> PRT
<213> Homo sapiens

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<400> 236
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Met Ile Phe Pro Pro Ser Ser Arg Asp Gln Arg Glu Leu Ile Glu Cys
1           5           10           15

```

```

Asp Asn Asp Ser Leu Ala Gly Thr Ala Glu Ala Ser Gly Ser Phe Leu
          20           25           30

```

```

Arg Ser Ala Val Lys Glu Asp Glu Lys His Gly Tyr Ala Leu Leu Leu
      35           40           45

```

```

Val Pro Leu Phe Leu Tyr Leu Ile Ser Thr Ser Phe Tyr Lys Tyr Ile
      50           55           60

```

```

Arg Ala Thr Leu Ser Leu Cys Ile Ser Asn Lys Ala Lys Arg Gly Cys
65           70           75           80

```

```

Asn Tyr Thr Leu Leu Gln Ser Ser Val Ser Pro Gly Asn Arg Asn Ala
          85           90           95

```

```

Lys Ala Leu Lys Ala Ser Leu Phe Ala Asp Met Val Ser Trp Val Pro
      100           105           110

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Trp Ala Lys Ser Phe Cys Cys Pro Pro Leu Ser Pro Ser Lys Leu Gly
 115 120 125

Pro Phe
 130

<210> 237
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 237
 atgattcttt agcagggg 18

<210> 238
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 238
 ctctttttgc cttgtttg 18

<210> 239
 <211> 1293
 <212> DNA
 <213> Homo sapiens

<400> 239
 aggccgaggg gttcggcgac gcggagggag ggagagtctg ggccgcgcgg gagccgcagg 60
 gcgccctagc cttcgcagaa acgatggcgg aggaagaagg accacctgta gagctgcgcc 120
 aaagaaaaaa gccaaagtct tcagaaaata aggaatctgc caaagaagag aaaatcagtg 180
 acattccaat tcctgaaaga gtcctaaaac atgtattatt tcaacgcttt gcaaagattt 240
 tcattggctg tcttgcagcg gttactagtg gtatgatgta tgctctctac ttatcagcat 300
 accatgaacg gaaattctgg ttttccaaca ggcaggagct tgaacgggaa atcacgtttc 360
 aggggtgacag tgccatttat tactcctatt ataaagatat gttaaaggca ccttcatttg 420
 aaagaggtgt ttacgaactg acacacaata acaaaactgt atctctgaag actataaatg 480
 cagtgcagca aatgtctctg tatccggaac ttattgctag cattttatat caagccactg 540
 gtagcaatga gattattgag ccagtgtatt tctatattgg cattgttttt ggattgcaag 600
 gaatatatgt tactgcttta tttgttacia gttggcttat gagtgggaaca tggctagcag 660
 gaatgcttac tgttgcgtgg ttcgttatta acagttgcac agacccttg tacagtgtgg 720

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gaggtgacaa cacaggatat taataccagg aggcaggaat cattgggacc gtcttggagg      780
ctggctacca cattcaatta actttgctat taatttcacg taatccctat atctgtcttc      840
atatttgaag aggaaaagat actttctcat gtaaacataa tggttttaaa gaataagact      900
ctcttatgct acttaaacia aagaataaga ctctctttag agatcttagt gagaattgta      960
agaaataaaa taaacagaag tctgactgcc ttatttgatg tctactgatg atgttgtatt     1020
gctggagtag aagttaaata gaaaaattga cctgggtatat tctactcaaa tgtatctttt     1080
gacaattgaa atgttcttaa tagctaagtt ttaaaaaatg cgtttggttg ctttttggtt     1140
atattttatt ggtatgtatc ttgtactgca aaatacattt taatgccatg aaagaatatg     1200
ctgtctcttt attcatcagc tttatagctt ttatttatat atgacttctt agaaaagtat     1260
aaaaagatat taaagtcatt ccattatatt atg                                     1293

```

```

<210> 240
<211> 219
<212> PRT
<213> Homo sapiens
<400> 240

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```

Met Ala Glu Glu Glu Gly Pro Pro Val Glu Leu Arg Gln Arg Lys Lys
1          5          10          15

```

```

Pro Lys Ser Ser Glu Asn Lys Glu Ser Ala Lys Glu Glu Lys Ile Ser
          20          25          30

```

```

Asp Ile Pro Ile Pro Glu Arg Ala Pro Lys His Val Leu Phe Gln Arg
          35          40          45

```

```

Phe Ala Lys Ile Phe Ile Gly Cys Leu Ala Ala Val Thr Ser Gly Met
          50          55          60

```

```

Met Tyr Ala Leu Tyr Leu Ser Ala Tyr His Glu Arg Lys Phe Trp Phe
65          70          75          80

```

```

Ser Asn Arg Gln Glu Leu Glu Arg Glu Ile Thr Phe Gln Gly Asp Ser
          85          90          95

```

```

Ala Ile Tyr Tyr Ser Tyr Tyr Lys Asp Met Leu Lys Ala Pro Ser Phe
          100          105          110

```

```

Glu Arg Gly Val Tyr Glu Leu Thr His Asn Asn Lys Thr Val Ser Leu
          115          120          125

```

```

Lys Thr Ile Asn Ala Val Gln Gln Met Ser Leu Tyr Pro Glu Leu Ile
          130          135          140

```


Ala Ser Ile Leu Tyr Gln Ala Thr Gly Ser Asn Glu Ile Ile Glu Pro
 145 150 155 160

Val Tyr Phe Tyr Ile Gly Ile Val Phe Gly Leu Gln Gly Ile Tyr Val
 165 170 175

Thr Ala Leu Phe Val Thr Ser Trp Leu Met Ser Gly Thr Trp Leu Ala
 180 185 190

Gly Met Leu Thr Val Ala Trp Phe Val Ile Asn Ser Cys Thr Asp Pro
 195 200 205

Trp Tyr Ser Val Gly Gly Asp Asn Thr Gly Tyr
 210 215

<210> 241
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 241
 accgctgcaa gacagccaa 19

<210> 242
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 242
 gcagaaacga tggcggagga 20

<210> 243
 <211> 1291
 <212> DNA
 <213> Homo sapiens

<400> 243
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 gacagctgca tggaaaacaa aattctgctg ggagtaaattg gaggcctgtg cctgcttata 120
 tcattggtag ccatctcacc ctgggtccaa aatcgacagc cacactcggg gctcttataa 180
 tcaggggtca taagctgcta tgtcacctac ctcaccttct cagctctgtc cagcaaacct 240
 gcagaagtag ttctagatga acatgggaaa aatgtttacaa tctgtgtgcc tgactttggg 300
 caagacctgt acagagatga aaacttggtg actatactgg ggaccagcct cttaatcgga 360

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tgtatcttgt attcatgttt gacatcaaca acaagatcga gttctgacgc tctgcagggg 420
cgatacgtag ctccctgaatt ggagatagct cgctgttgtt tttgcttcag tcctgggtgga 480
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gtgatgatga ccgtcaccaa ctgggttaac tacgaaagtg ccaacatcga gagcttcttc 660
agcgggagct ggtccatctt ctgggtcaag atggcctcct gctggatatg cgtgctgttg 720
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```

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<210> 244
<211> 257
<212> PRT
<213> Homo sapiens

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<400> 244
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```

Met Tyr Ser Ile Ala Thr Gly Gly Leu Val Leu Met Ala Val Phe Tyr
1           5           10          15

```

```

Thr Gln Lys Asp Ser Cys Met Glu Asn Lys Ile Leu Leu Gly Val Asn
          20          25          30

```

```

Gly Gly Leu Cys Leu Leu Ile Ser Leu Val Ala Ile Ser Pro Trp Val
          35          40          45

```

```

Gln Asn Arg Gln Pro His Ser Gly Leu Leu Gln Ser Gly Val Ile Ser
          50          55          60

```

```

Cys Tyr Val Thr Tyr Leu Thr Phe Ser Ala Leu Ser Ser Lys Pro Ala
65          70          75          80

```

```

Glu Val Val Leu Asp Glu His Gly Lys Asn Val Thr Ile Cys Val Pro
          85          90          95

```

Asp Phe Gly Gln Asp Leu Tyr Arg Asp Glu Asn Leu Val Thr Ile Leu
 100 105 110

Gly Thr Ser Leu Leu Ile Gly Cys Ile Leu Tyr Ser Cys Leu Thr Ser
 115 120 125

Thr Thr Arg Ser Ser Ser Asp Ala Leu Gln Gly Arg Tyr Ala Ala Pro
 130 135 140

Glu Leu Glu Ile Ala Arg Cys Cys Phe Cys Phe Ser Pro Gly Gly Glu
 145 150 155 160

Asp Thr Glu Glu Gln Gln Pro Gly Lys Glu Gly Pro Arg Val Ile Tyr
 165 170 175

Asp Glu Lys Lys Gly Thr Val Tyr Ile Tyr Ser Tyr Phe His Phe Val
 180 185 190

Phe Phe Leu Ala Ser Leu Tyr Val Met Met Thr Val Thr Asn Trp Phe
 195 200 205

Asn Tyr Glu Ser Ala Asn Ile Glu Ser Phe Phe Ser Gly Ser Trp Ser
 210 215 220

Ile Phe Trp Val Lys Met Ala Ser Cys Trp Ile Cys Val Leu Leu Tyr
 225 230 235 240

Leu Cys Thr Leu Val Ala Pro Leu Cys Cys Pro Thr Arg Glu Phe Ser
 245 250 255

Val

<210> 245
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 245
 agtcaggcac acagattg

18

<210> 246
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Oligonucleotide

<400> 246

ttctgctggg agtaaag

18

<210> 247

<211> 2412

<212> DNA

<213> Homo sapiens

<400> 247

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cccgtgactc agtcctctg aaggagcag ccctcttttt tggcaatcac caggaggtg 120

gggggaggag gaggggagct aggtggtgac atcacagtcg aaggttataa aagcttccag 180

ccaaacggca ttgaagttga agatacaacc tgacagcaca gcctgagatc ttggggatcc 240

ctcagcctaa caccacaga cgtcagctgg tggattcccg ctgcatcaag gcctaccac 300

tgtctccatg ctgggctctc cctgccttct gtggctcctg gccgtgacct tcttggttcc 360

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ggcgtggccg cctttgccg ctgtcccctg cgactacgac cactgccgac acctgcaggt 480

gccctgcaag gagctacaga gggtcgggccc ggccggcctgc ctgtgccag gactctccag 540

ccccgcccag ccgcccgacc cgcgcgcacat gggagaagtg cgcattgcg cgaagaggg 600

ccgcgcagtg gtccactggt gtgccccctt ctccccggtc ctccactact ggctgctgct 660

ttgggacggc agcgaggctg cgcagaaggg gccccgcgtg aacgctacgg tccgcagagc 720

cgaaactgaag gggctgaagc cagggggcat ttatgtcgtt tgcgtagtgg ccgctaacga 780

ggccggggca agccgcgtgc cccaggctgg aggagagggc ctcgaggggg ccgacatccc 840

tgccttcggg ccttgacgac gccttgccgt gccgcccac cccgcactc tgggtccacgc 900

ggccgtcggg gtgggcacgg ccctggccct gctaagctgt gccgccctgg tgtggcactt 960

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acgacctgac ttagtaatgc gaacctatag tagcagctac tccagaggct gaaatgggag 1440

gatctcttga gccaggagt tggagtccag tccagccagg gcaacacagc cagacgcct 1500

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 aagctggagg gcaatggcgc catctcagct cactgcaacg tccacctcct gggttcaagc 1620
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 ttaaaaggaa gt 2412

<210> 248
 <211> 238
 <212> PRT
 <213> Homo sapiens

<400> 248

Met Leu Gly Ser Pro Cys Leu Leu Trp Leu Leu Ala Val Thr Phe Leu
 1 5 10 15

Val Pro Arg Ala Gln Pro Leu Ala Pro Gln Asp Phe Glu Glu Glu Glu
 20 25 30

Ala Asp Glu Thr Glu Thr Ala Trp Pro Pro Leu Pro Ala Val Pro Cys
 35 40 45

Asp Tyr Asp His Cys Arg His Leu Gln Val Pro Cys Lys Glu Leu Gln
 50 55 60

Arg Val Gly Pro Ala Ala Cys Leu Cys Pro Gly Leu Ser Ser Pro Ala
 65 70 75 80

Gln Pro Pro Asp Pro Pro Arg Met Gly Glu Val Arg Ile Ala Ala Glu
 85 90 95

Glu Gly Arg Ala Val Val His Trp Cys Ala Pro Phe Ser Pro Val Leu
 100 105 110

His Tyr Trp Leu Leu Leu Trp Asp Gly Ser Glu Ala Ala Gln Lys Gly
 115 120 125

Pro Pro Leu Asn Ala Thr Val Arg Arg Ala Glu Leu Lys Gly Leu Lys
 130 135 140

Pro Gly Gly Ile Tyr Val Val Cys Val Val Ala Ala Asn Glu Ala Gly
 145 150 155 160

Ala Ser Arg Val Pro Gln Ala Gly Gly Glu Gly Leu Glu Gly Ala Asp
 165 170 175

Ile Pro Ala Phe Gly Pro Cys Ser Arg Leu Ala Val Pro Pro Asn Pro
 180 185 190

Arg Thr Leu Val His Ala Ala Val Gly Val Gly Thr Ala Leu Ala Leu
 195 200 205

Leu Ser Cys Ala Ala Leu Val Trp His Phe Cys Leu Arg Asp Arg Trp
 210 215 220

Gly Cys Pro Arg Arg Ala Ala Ala Arg Ala Ala Gly Ala Leu
 225 230 235

<210> 249
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 249
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18

<210> 250
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 250
 gccgtctcag tctcatct

18

<210> 251

<211> 1024
 <212> DNA
 <213> Homo sapiens

<400> 251
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 gctgcacagg ctaaagctaa atgatattct aagtgacaaa gtgttcacct gaataccatc 660
 cctgtcatca gcaacagtag aagatgggaa aatagaata tttacaaaa tatctgccat 720
 ggttttattt tggtaacaag aagcacaatg tcttttttat ttttatttt tagtaaactt 780
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<210> 252
 <211> 162
 <212> PRT
 <213> Homo sapiens

<400> 252
 Met Leu Arg Ala Val Gly Ser Leu Leu Arg Leu Gly Arg Gly Leu Thr
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 Val Arg Cys Gly Pro Gly Ala Pro Leu Glu Ala Thr Arg Arg Pro Ala
 20 25 30
 Pro Ala Leu Pro Pro Arg Gly Leu Pro Cys Tyr Ser Ser Gly Gly Ala
 35 40 45
 Pro Ser Asn Ser Gly Pro Gln Gly His Gly Glu Ile His Arg Val Pro

50

55

60

Thr Gln Arg Arg Pro Ser Gln Phe Asp Lys Lys Ile Leu Leu Trp Thr
 65 70 75 80

Gly Arg Phe Lys Ser Met Glu Glu Ile Pro Pro Arg Ile Pro Pro Glu
 85 90 95

Met Ile Asp Thr Ala Arg Asn Lys Ala Arg Val Lys Ala Cys Tyr Ile
 100 105 110

Met Ile Gly Leu Thr Ile Ile Ala Cys Phe Ala Val Ile Val Ser Ala
 115 120 125

Lys Arg Ala Val Glu Arg His Glu Ser Leu Thr Ser Trp Asn Leu Ala
 130 135 140

Lys Lys Ala Lys Trp Arg Glu Glu Ala Ala Leu Ala Ala Gln Ala Lys
 145 150 155 160

Ala Lys

<210> 253
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 253
 attatcgctt gctttgctg 19

<210> 254
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 254
 ttcccatctt ctactgttgc tg 22

<210> 255
 <211> 852
 <212> DNA
 <213> Homo sapiens

<400> 255
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aagcttcctc tcagtgacca caatatgaat gggaacagca agatggcaaa agcttgctga 240
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tagtgggtggc cagcatggcc ctgctgcagc tccacgctgt ggggggctg gccctgacca 660
gcagccaccc ctccatgtgg gccacagggg aggagcttag gaagccgcct tggcaaggtt 720
ccgcaggctc tgcgtctggt gtggaagagc tcacggggaa gcactcctgc ccaggacccg 780
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<210> 256
<211> 110
<212> PRT
<213> Homo sapiens

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<400> 256
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Met Trp Ser Leu Trp Ile Trp Val Asp Gln His Gln Ala Arg Leu Ile
1           5           10          15

```

```

Pro Ser Pro Gln Val Leu Leu Leu Leu Arg Glu Ala Pro Ser Thr
          20          25          30

```

```

Ala Ala Ala Val Ala Gly Trp Leu Val Val Ala Ser Met Ala Leu Leu
          35          40          45

```

```

Gln Leu His Ala Val Gly Gly Val Ala Leu Thr Ser Ser His Pro Ser
          50          55          60

```

```

Met Trp Ala Thr Gly Glu Glu Leu Arg Lys Pro Pro Trp Gln Gly Ser
65          70          75          80

```

```

Ala Gly Ser Ala Ser Gly Val Glu Glu Leu Thr Gly Lys His Ser Cys
          85          90          95

```

```

Pro Gly Pro Glu Glu Pro Ala Thr Val Gln Lys Ala Pro Ala
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<210> 257
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 257
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<210> 258
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 258
 gataaagtct ggttcctcc 19

<210> 259
 <211> 4231
 <212> DNA
 <213> Homo sapiens

<400> 259
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 tcccgggcaa cctcttctct ctgtgggtgc tgtgccggcg catggggccc agatccccgt 420
 cggatcatctt catgatcaac ctgagcgtca cggacctgat gctggccagc gtgttgccctt 480
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tgaattatca ttcccaaacc cgtgtccacc tggaacatca ggatgggacc atgtttgaaa 2880
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aaaaaaaaa tgagctttga agtgcacagg g 4231

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<210> 260
<211> 359
<212> PRT
<213> Homo sapiens

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<400> 260
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Met Gln Val Pro Asn Ser Thr Gly Pro Asp Asn Ala Thr Leu Gln Met
1           5           10           15

```

```

Leu Arg Asn Pro Ala Ile Ala Val Ala Leu Pro Val Val Tyr Ser Leu
20           25           30

```

Val Ala Ala Val Ser Ile Pro Gly Asn Leu Phe Ser Leu Trp Val Leu
 35 40 45
 Cys Arg Arg Met Gly Pro Arg Ser Pro Ser Val Ile Phe Met Ile Asn
 50 55 60
 Leu Ser Val Thr Asp Leu Met Leu Ala Ser Val Leu Pro Phe Gln Ile
 65 70 75 80
 Tyr Tyr His Cys Asn Arg His His Trp Val Phe Gly Val Leu Leu Cys
 85 90 95
 Asn Val Val Thr Val Ala Phe Tyr Ala Asn Met Tyr Ser Ser Ile Leu
 100 105 110
 Thr Met Thr Cys Ile Ser Val Glu Arg Phe Leu Gly Val Leu Tyr Pro
 115 120 125
 Leu Ser Ser Lys Arg Trp Arg Arg Arg Arg Tyr Ala Val Ala Ala Cys
 130 135 140
 Ala Gly Thr Trp Leu Leu Leu Leu Thr Ala Leu Ser Pro Leu Ala Arg
 145 150 155 160
 Thr Asp Leu Thr Tyr Pro Val His Ala Leu Gly Ile Ile Thr Cys Phe
 165 170 175
 Asp Val Leu Lys Trp Thr Met Leu Pro Ser Val Ala Met Trp Ala Val
 180 185 190
 Phe Leu Phe Thr Ile Phe Ile Leu Leu Phe Leu Ile Pro Phe Val Ile
 195 200 205
 Thr Val Ala Cys Tyr Thr Ala Thr Ile Leu Lys Leu Leu Arg Thr Glu
 210 215 220
 Glu Ala His Gly Arg Glu Gln Arg Arg Arg Ala Val Gly Leu Ala Ala
 225 230 235 240
 Val Val Leu Leu Ala Phe Val Thr Cys Phe Ala Pro Asn Asn Phe Val
 245 250 255
 Leu Leu Ala His Ile Val Ser Arg Leu Phe Tyr Gly Lys Ser Tyr Tyr
 260 265 270
 His Val Tyr Lys Leu Thr Leu Cys Leu Ser Cys Leu Asn Asn Cys Leu

275

280

285

Asp Pro Phe Val Tyr Tyr Phe Ala Ser Arg Glu Phe Gln Leu Arg Leu
 290 295 300

Arg Glu Tyr Leu Gly Cys Arg Arg Val Pro Arg Asp Thr Leu Asp Thr
 305 310 315 320

Arg Arg Glu Ser Leu Phe Ser Ala Arg Thr Thr Ser Val Arg Ser Glu
 325 330 335

Ala Gly Ala His Pro Glu Gly Met Glu Gly Ala Thr Arg Pro Gly Leu
 340 345 350

Gln Arg Gln Glu Ser Val Phe
 355

<210> 261
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 261
 cctgttacct ggagaccct 19

<210> 262
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 262
 accagcgagt acaccacg 18

<210> 263
 <211> 717
 <212> DNA
 <213> Homo sapiens

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 catactggaa cttcaaaaag ttctgaaaac atgttgtgct cagagcatga aaattttctg 180
 ctgtcttttg aactttgtct acaaacagtt agaagatgca gcccaagggc tcaccatggg 240
 tggcgatggt gaagaacatg aagaccttac tgctgatagc accatcttca aatttgtgga 300

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agcttataca gagtgggagg tgaagaggtg gtcagacaac aatctgataa tgaaacaaac   360
aaatgtgaag agaagacgct tagatgatgt tggccctgaa ttggaaaagg ctgtctggga   420
gctcggtctgc ccaccagca ttcagtgtct gctacctcct gtctgttatg cttgtgtctg   480
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catggagaat ggggtaccca tcacatcaag catttatcct ttgtgttaca aacggtccag   660
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<210> 264

<211> 171

<212> PRT

<213> Homo sapiens

<400> 264

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Met Thr Glu Glu Thr Arg Ile Val Tyr Trp Ile Lys Asp Arg Gln Leu
1           5           10           15

```

```

Thr Asn Arg Asp Ser Thr Ile Leu Glu Leu Gln Lys Val Leu Lys Thr
          20           25           30

```

```

Cys Cys Ala Gln Ser Met Lys Ile Phe Cys Cys Leu Trp Asn Phe Val
          35           40           45

```

```

Tyr Lys Gln Leu Glu Asp Ala Ala Gln Gly Leu Thr Met Gly Gly Asp
          50           55           60

```

```

Val Glu Glu His Glu Asp Leu Thr Ala Asp Ser Thr Ile Phe Lys Phe
65           70           75           80

```

```

Val Glu Ala Tyr Thr Glu Trp Glu Val Lys Arg Trp Ser Asp Asn Asn
          85           90           95

```

```

Leu Ile Met Lys Gln Thr Asn Val Lys Arg Arg Arg Leu Asp Asp Val
          100          105          110

```

```

Gly Pro Glu Leu Glu Lys Ala Val Trp Glu Leu Gly Cys Pro Pro Ser
          115          120          125

```

```

Ile Gln Cys Leu Leu Pro Pro Val Cys Tyr Ala Cys Val Trp Phe Phe
          130          135          140

```

```

Gln Val Leu Ile Phe Phe Leu Ile Leu Ser Phe Cys Gly Tyr Ile Val
          145          150          155          160

```

Gly Val Tyr Ile Tyr Gly Leu His Glu Met Phe
165 170

```
<210> 265
<211> 18
<212> DNA
<213> Artificial Sequence
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<220>
<223> Oligonucleotide

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<400> 265
ttcaacatcg ccacccat 18
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```
<210> 266
<211> 20
<212> DNA
<213> Artificial Sequence
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<220>
<223> Oligonucleotide

```
<400> 266
cagcagaggg gaaqtggtca 20
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```
<210> 267
<211> 390
<212> DNA
<213> Homo sapiens
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gatctggagg ttggagggtt agctggacag ccccttaaag ttttcactcc acgtaaaaaa       180
ggttctgggg aagtgggtga tgctttctcag tcgccagca gaagcaatga tggccagcat       240
tcctgcattg gccacagcag agatctctgc tgctacactg ctacagaccct cataatctcc       300
tacacatcaa atggtctttc tccttttagca actccaccct tccaccctat tcctggaaac       360
tgctacgaca gtgttgatta taaaatatag                                     390
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<210> 268
<211> 129
<212> PRT
<213> Homo sapiens
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<400> 268

Met Glu Val Ile Leu Pro Asp Lys Pro Gln Val Asp Ala Leu Ala Phe
1 5 10 15

Leu Ala Ala Val Thr Met Leu Trp Ile Thr Leu Pro Met Ser Pro Phe
20 25 30

Ala Glu Ala Glu Lys Leu Ala Trp Asp Leu Glu Val Gly Gly Leu Ala
 35 40 45

Gly Gln Pro Leu Lys Val Phe Thr Pro Arg Lys Lys Gly Ser Gly Glu
 50 55 60

Val Gly Asp Ala Ser Gln Ser Pro Ser Arg Ser Asn Asp Gly Gln His
 65 70 75 80

Ser Cys Ile Gly His Ser Arg Asp Leu Cys Cys Tyr Thr Ala Gln Thr
 85 90 95

Leu Ile Ile Ser Tyr Thr Ser Asn Gly Leu Ser Pro Leu Ala Thr Pro
 100 105 110

Pro Phe His Pro Ile Pro Gly Asn Cys Tyr Asp Ser Val Asp Tyr Lys
 115 120 125

Ile

<210> 269
 <211> 2856
 <212> DNA
 <213> Homo sapiens

<400> 269
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 ggggaatgggg ggatgatcat tctaatacaa gtggatgcc aactccacac ccccggtgac 180
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 ggccggcatc atcgcaagtg ggaaaaactg aagtga 2856

<210> 270
 <211> 951
 <212> PRT
 <213> Homo sapiens

<400> 270

Met Ala Lys Arg Asn Leu Ser Thr Val Thr Glu Phe Ile Leu Val Val
 1 5 10 15

Phe Thr Asp His Pro Glu Leu Ala Val Pro Leu Phe Leu Val Phe Leu
 20 25 30

Ser Phe Tyr Leu Val Thr Phe Leu Gly Asn Gly Gly Met Ile Ile Leu
 35 40 45

Ile Gln Val Asp Ala Gln Leu His Thr Pro Val Tyr Phe Phe Leu Ser
 50 55 60

His Leu Ala Phe Leu Asp Ala Cys Cys Ala Ser Val Ile Thr Pro Gln
 65 70 75 80

Ile Leu Ala Thr Leu Ala Thr Asp Lys Thr Val Ile Ser Tyr Gly Cys
 85 90 95

Arg Ala Val Gln Phe Ser Phe Phe Thr Ile Cys Ala Gly Thr Glu Cys
 100 105 110

Tyr Leu Leu Ser Val Met Ala Tyr Asp Arg Phe Val Ala Ile Ser Asn
 115 120 125

Pro Leu His Cys Asn Met Thr Met Thr Pro Gly Thr Cys Arg Val Phe
 130 135 140

Leu Ala Ser Ala Phe Ile Cys Gly Val Ser Gly Ala Ile Leu His Thr
 145 150 155 160

Thr Cys Thr Phe Thr Leu Ser Phe Cys Cys Asp Asn Gln Ile Asn Phe
 165 170 175

Phe Phe Cys Asp Leu Pro Pro Leu Leu Lys Leu Ala Cys Ser Ser Met
 180 185 190

Thr	Gln	Thr	Glu	Ile	Val	Ile	Leu	Leu	Cys	Ala	Lys	Cys	Met	Phe	Leu
	195						200					205			
Ala	Asn	Val	Met	Val	Ile	Leu	Ile	Cys	Tyr	Met	Leu	Ile	Ile	Arg	Ala
	210					215					220				
Ile	Leu	Arg	Val	Lys	Ser	Ala	Gly	Gly	Leu	Leu	Ile	Ala	Ser	Ala	His
225					230					235					240
Phe	Asp	Ala	Tyr	Val	Tyr	Glu	Thr	Gly	Ile	Asn	Tyr	Asn	Thr	Val	Tyr
				245					250					255	
Gly	Ser	Gly	Lys	Ala	Val	Gly	Trp	Ser	Trp	Arg	Ser	Leu	Arg	Glu	Thr
			260					265					270		
Asn	His	Met	Arg	Pro	Gly	Asn	Thr	Ser	Lys	His	Ser	Ala	Ala	Gln	Leu
		275					280					285			
His	Gln	Cys	Leu	Ile	Gln	Gln	Val	Gly	Arg	Trp	Pro	Leu	Gln	Ser	Met
	290					295					300				
Pro	Phe	Pro	Val	Ser	Ala	Gly	Pro	Pro	Tyr	Lys	Ser	Val	Gln	Pro	Leu
305					310					315					320
Pro	Gly	Asp	Pro	Arg	Pro	Leu	Leu	Cys	Ile	Thr	Gly	Leu	Phe	Leu	Thr
				325					330					335	
Leu	Lys	Met	Met	Gly	Cys	Gly	Pro	Arg	Arg	Pro	Arg	Asp	Arg	Lys	Ser
			340					345					350		
Asp	Phe	Phe	Ile	Asn	Thr	Asp	Pro	Gly	Ala	Gly	Ser	Pro	Glu	Glu	Gln
		355					360					365			
Arg	Cys	Gly	Trp	Glu	Gly	His	Pro	Ser	His	Ser	Tyr	Thr	Leu	Gly	Leu
	370					375					380				
Ser	Leu	Pro	Val	Asn	Phe	Gly	Leu	Lys	Cys	Pro	Trp	Trp	Thr	Leu	Ser
385					390					395					400
Gly	Pro	Pro	Ala	Thr	Cys	Gln	Arg	Pro	Asp	Leu	Gln	Thr	Pro	Ser	Pro
				405					410					415	
Pro	Lys	Glu	Ile	Cys	Ser	Ser	Gly	Leu	Arg	Pro	Leu	Thr	His	Ser	Ala
			420					425					430		
Gly	Pro	Asp	Arg	Ser	Gln	Val	Pro	Ala	Ala	Ser	Gly	Ala	Ala	Thr	Met
		435					440					445			

Leu Thr Lys Gly Leu Pro Asp Ile Thr Val Gly Leu Gln Ile Tyr Asp
 450 455 460

Ser Cys Ile Ser Gly Ile Gln Ala Leu Gly Ser Thr Leu Ala Leu Leu
 465 470 475 480

Ser Asn Gln Leu Pro Pro Thr Thr Asn Tyr Ala Cys Gly Ser Gln Gln
 485 490 495

His Leu Leu Gly Val Val Gly Gly Met Thr Phe Leu Glu Ser Glu Pro
 500 505 510

Met Ser Glu Leu Leu Ser Ile Tyr Arg Val Pro Gln Gly Gln Arg Leu
 515 520 525

Thr Lys Asn Phe Glu Val Lys Glu Leu Val Cys Thr Tyr Leu Val Gly
 530 535 540

Gln Leu Pro Tyr Gly Leu Val Ser Tyr Asp Asn Ser Asn Phe Glu Trp
 545 550 555 560

Leu Asp Gln Gln Leu Gln Lys Gln Ile Gly Gly Glu Gly Leu Pro Val
 565 570 575

Gly Ala Ala Pro Ser Arg Val Ala Arg Gln Gln Ser Asp Glu Glu Ala
 580 585 590

Val Gly Gly Val Gln Gly Tyr Arg Trp Ser Gly Leu Gly Ala Ser Ile
 595 600 605

Gln Ser Ala Arg Glu Gly Ala Trp His Arg Thr Gly Leu Glu Asn Met
 610 615 620

Thr Thr Ala His Leu Ser Ala Phe Lys Leu Pro Asp Leu Thr Ala Thr
 625 630 635 640

Tyr Gln Ala Tyr Leu Ala Ala Lys Ala Leu Trp Val Ala Tyr Gln Asn
 645 650 655

Leu Met Ser Cys Ser Glu Arg Glu Gly Pro Phe Leu Gly Gly Thr Tyr
 660 665 670

Ala Asn Ala Trp Glu Ala Arg Leu Ser Gln Val Asn Phe Thr Thr Lys
 675 680 685

Ala Gln Glu Glu Val Phe Phe Ala Lys Asp Gly Glu Val Leu Thr Thr

690

695

700

Phe Asp Ile Lys Asn Ile Tyr Val Leu Pro Asp Leu Ser Gly Gln Thr
 705 710 715 720

Ala Ile Val Gly His Phe Asp Phe Arg Ala Pro Ser Gly Lys Glu Leu
 725 730 735

Leu Leu Asp Asp Ser Ala Ile Val Trp Ala Glu Gly Pro Leu Lys Ile
 740 745 750

Arg Ala Glu Arg Thr Leu Arg Thr Lys Thr Thr Gln His Leu Ser His
 755 760 765

Pro Lys Leu Gln Glu Ser Leu Pro Leu Ser Ala Thr Lys Asn Val Leu
 770 775 780

Trp Lys Pro Gly Ser Gln Pro Tyr Leu Arg Ser Gln Asn Ala Ala Thr
 785 790 795 800

Lys Ala Phe Pro Asp Pro Glu Glu Lys Ser Gln Cys His Gln Phe Leu
 805 810 815

Phe Leu Pro Ser Asp Ser Val Ala Cys Gln Lys Cys Ser Asp Asn Gln
 820 825 830

Trp Pro Asn Val Gln Lys Gly Glu Cys Ile Pro Lys Thr Leu Asp Phe
 835 840 845

Leu Phe Tyr His Lys Pro Leu Asp Thr Ala Leu Ala Val Cys Thr Ala
 850 855 860

Leu Leu Phe Leu Leu Ala Leu Ala Ile Leu Gly Ile Phe His Val Val
 865 870 875 880

Cys Ser Cys Val Trp Val Ser Phe Ile Pro Ala His Met His Ala His
 885 890 895

Ser Lys Asp Thr Met Ala Met Glu Val Phe Val Ile Leu Ala Ser Ala
 900 905 910

Gly Gly Leu Met Ser Ser Leu Phe Phe Ser Lys Cys Tyr Ile Ile Leu
 915 920 925

Leu His Pro Glu Lys Asn Thr Lys Asp Gln Met Phe Gly Arg His His
 930 935 940

Arg Lys Trp Glu Lys Leu Lys
945 950

<210> 271
<211> 956
<212> DNA
<213> Homo sapiens

<400> 271
gcccgcgtgt atggggccag cggacacttc gccccaggca ccactgtgcc cctggccctg 60
ccacctggtg gcaatggctc agccacacct gacaatggca ccacccttg ggccgagggc 120
tggcggcagt tgctgggcct actccccgag cacatggcgg agaagctgtg tgaggcctgg 180
gcctttgggc agagccacca gacgggcgtc gtggcactgg gcctactcac ctgcctgctg 240
gcaatgctgc tggctggccg catcaggctc cggaggatcg atgccttctg cacctgcctg 300
tgggccctgc tgctggggct gcacctggct gagcagcacc tgcaggccgc ctgccttagc 360
tggetagaca cgctcaagtt cagcaccaca tctttgtgct gcctggttgg cttcacggcg 420
gctgtggcca caaggaaggc aacgggcca cggaggttcc ggccccgaag gttcttcca 480
ggagactctg cgggcctttt ccccaccagc ccagcttg ccacccctca cccgagtgtc 540
ggaggctctc cagcgtctct gtccatcccc agcccgcca gcttctgccc cctcgccaac 600
caagcagctc ttccggtctc ctgcagggac ctcaccctcc tcatttgctt ggccgcctca 660
gccgggccct ctctctggga accataccct ctctgactcg agcagactcc ggctatctgt 720
tcagcggtag ccgccacca tctcaggtgt ctcgatctgg gggagtttcc tgttttcaga 780
ttacttctct cttcttgctg gggaagctgc cctccgctcc catcctttcc cagggccttc 840
cgggggcggc tcggtgggccc tccagtccgg ctctctggcc acgggaggcc ctcacagacc 900
tgccggtcaa cctgaggggac gaagtgtgtt gtccggcacc cctggagagg cccaaa 956

<210> 272
<211> 231
<212> PRT
<213> Homo sapiens

<400> 272

Ala Ala Leu Tyr Gly Ala Ser Gly His Phe Ala Pro Gly Thr Thr Val
1 5 10 15

Pro Leu Ala Leu Pro Pro Gly Gly Asn Gly Ser Ala Thr Pro Asp Asn
20 25 30

Gly Thr Thr Pro Gly Ala Glu Gly Trp Arg Gln Leu Leu Gly Leu Leu
35 40 45

Pro Glu His Met Ala Glu Lys Leu Cys Glu Ala Trp Ala Phe Gly Gln
50 55 60

Ser His Gln Thr Gly Val Val Ala Leu Gly Leu Leu Thr Cys Leu Leu
65 70 75 80

Ala Met Leu Leu Ala Gly Arg Ile Arg Leu Arg Arg Ile Asp Ala Phe
85 90 95

Cys Thr Cys Leu Trp Ala Leu Leu Leu Gly Leu His Leu Ala Glu Gln
100 105 110

His Leu Gln Ala Ala Ser Pro Ser Trp Leu Asp Thr Leu Lys Phe Ser
115 120 125

Thr Thr Ser Leu Cys Cys Leu Val Gly Phe Thr Ala Ala Val Ala Thr
130 135 140

Arg Lys Ala Thr Gly Pro Arg Arg Phe Arg Pro Arg Arg Phe Phe Pro
145 150 155 160

Gly Asp Ser Ala Gly Leu Phe Pro Thr Ser Pro Ser Leu Ala Ile Pro
165 170 175

His Pro Ser Val Gly Gly Ser Pro Ala Ser Leu Phe Ile Pro Ser Pro
180 185 190

Pro Ser Phe Leu Pro Leu Ala Asn Gln Ala Ala Leu Pro Val Ser Ser
195 200 205

Thr Asp Leu Thr Leu Leu Ile Cys Leu Ala Ala Ser Ala Gly Pro Ser
210 215 220

Leu Trp Glu Pro Tyr Pro Leu
225 230

<210> 273

<211> 1806

<212> DNA

<213> Homo sapiens

<400> 273

gaggaggcgc gcgtcgccgc cccgcgtccc gcctgcggcc cgcgcccccg gcgtcacgcg 60

ctcctgcccc cctgccccgc tgcccgcctg cccgcctacc cgcctacccg cctaccgcgc 120

tacccccctg ccggcctgcc gtccttcac gcggagagcc atggagggag tgagcgcgct 180

gctggccccg tgccccacgg ccggcctggc cggcggcctg ggggtcacgg cgtgcgcgcg 240

ggccggcgctg	ttgctctacc	ggatcgcgcg	gaggatgaag	ccaacgcaca	cgatgggtcaa	300
ctgctgggttc	tgcaaccagg	atacgctggg	gccctatggg	aaccgcaact	gctggggactg	360
tccccactgc	gagcagtaca	acggcttcca	ggagaacggc	gactacaaca	agccgatccc	420
cgcccagtag	ttggagcacc	tgaaccacgt	ggtgagcagc	gcgcccagcc	tgcgcgaccc	480
ttcgcagccg	cagcagtggg	tgagcagcca	agtctgctg	tgcaagaggt	gcaaccacca	540
ccagaccacc	aagatcaagc	agctggccgc	cttcgctccc	cgcgaggagg	gcaggtatga	600
cgaggaggtc	gaggtgtacc	ggcatcacct	ggagcagatg	tacaagctgt	gccggccgtg	660
ccaagcggct	gtggagtact	acatcaagca	ccagaaccgc	cagctgcgcg	ccctgttgct	720
cagccaccag	ttcaagcgcc	gggaggccga	ccagaccac	gcacagaact	tctcctccgc	780
cgtgaagtcc	ccggtccagg	tcattcctgt	ccgtgccctc	gccttcctgg	cctgcgcctt	840
cctactgacc	accgcgctgt	atggggccag	cggacacttc	gccccaggca	ccactgtgcc	900
cctggccctg	ccacctgggtg	gcaatggctc	agccacacct	gacaatggca	ccaccctgg	960
ggccgagggc	tggcggcagt	tgctgggcct	actccccgag	cacatggcgg	agaagctgtg	1020
tgaggcctgg	gcctttgggc	agagccacca	gacgggcgtc	gtggcactgg	gcctactcac	1080
ctgcctgctg	gcaatgctgc	tggctggccg	catcaggctc	cggaggatcg	atgccttctg	1140
cacctgcctg	tgggccctgc	tgctggggct	gcacctggct	gagcagcacc	tgcaggccgc	1200
ctcgcctagc	tggctagaca	cgctcaagtt	cagcaccaca	tctttgtgct	gcctggttgg	1260
cttcacggcg	gctgtggcca	caaggaaggc	aacggggcca	cggaggttcc	ggccccgaag	1320
gttcttccca	ggagactctg	ccggcctttt	ccccaccagc	cccagcttgg	ccatccctca	1380
cccagtgctc	ggaggctctc	cagcgtctct	gttcattccc	agcccgccca	gcttcctgcc	1440
cctcgccaac	caagcagctc	ttccggctct	ctcgacggac	ctcaccctcc	tcatttgctt	1500
ggccgcctca	gccggggcct	ctctctggga	accataccct	ctctgactcg	agcagactcc	1560
ggctatctgt	tcagcggtag	ccgcccacca	tctcaggtgt	ctcgatctgg	gggagtttcc	1620
tgttttcaga	ttacttctct	cttcttgctg	gggaagctgc	ccctccgtcc	catcctttcc	1680
cagggccttc	cgggggcggc	tcgggtgggc	tccagtcggg	ctctctggcc	acgggaggcc	1740
ctcatcagcc	tgccgggtcaa	cctgaggggac	gaagtgtgtt	gtccggcacc	cctggagagg	1800
cccaaa						1806

<210> 274

<211> 461

<212> PRT

<213> Homo sapiens

<400> 274

Met Glu Gly Val Ser Ala Leu Leu Ala Arg Cys Pro Thr Ala Gly Leu
 1 5 10 15
 Ala Gly Gly Leu Gly Val Thr Ala Cys Ala Ala Ala Gly Val Leu Leu
 20 25 30
 Tyr Arg Ile Ala Arg Arg Met Lys Pro Thr His Thr Met Val Asn Cys
 35 40 45
 Trp Phe Cys Asn Gln Asp Thr Leu Val Pro Tyr Gly Asn Arg Asn Cys
 50 55 60
 Trp Asp Cys Pro His Cys Glu Gln Tyr Asn Gly Phe Gln Glu Asn Gly
 65 70 75 80
 Asp Tyr Asn Lys Pro Ile Pro Ala Gln Tyr Leu Glu His Leu Asn His
 85 90 95
 Val Val Ser Ser Ala Pro Ser Leu Arg Asp Pro Ser Gln Pro Gln Gln
 100 105 110
 Trp Val Ser Ser Gln Val Leu Leu Cys Lys Arg Cys Asn His His Gln
 115 120 125
 Thr Thr Lys Ile Lys Gln Leu Ala Ala Phe Ala Pro Arg Glu Glu Gly
 130 135 140
 Arg Tyr Asp Glu Glu Val Glu Val Tyr Arg His His Leu Glu Gln Met
 145 150 155 160
 Tyr Lys Leu Cys Arg Pro Cys Gln Ala Ala Val Glu Tyr Tyr Ile Lys
 165 170 175
 His Gln Asn Arg Gln Leu Arg Ala Leu Leu Leu Ser His Gln Phe Lys
 180 185 190
 Arg Arg Glu Ala Asp Gln Thr His Ala Gln Asn Phe Ser Ser Ala Val
 195 200 205
 Lys Ser Pro Val Gln Val Ile Leu Leu Arg Ala Leu Ala Phe Leu Ala
 210 215 220
 Cys Ala Phe Leu Leu Thr Thr Ala Leu Tyr Gly Ala Ser Gly His Phe
 225 230 235 240
 Ala Pro Gly Thr Thr Val Pro Leu Ala Leu Pro Pro Gly Gly Asn Gly
 245 250 255

Ser Ala Thr Pro Asp Asn Gly Thr Thr Pro Gly Ala Glu Gly Trp Arg
 260 265 270

Gln Leu Leu Gly Leu Leu Pro Glu His Met Ala Glu Lys Leu Cys Glu
 275 280 285

Ala Trp Ala Phe Gly Gln Ser His Gln Thr Gly Val Val Ala Leu Gly
 290 295 300

Leu Leu Thr Cys Leu Leu Ala Met Leu Leu Ala Gly Arg Ile Arg Leu
 305 310 315 320

Arg Arg Ile Asp Ala Phe Cys Thr Cys Leu Trp Ala Leu Leu Leu Gly
 325 330 335

Leu His Leu Ala Glu Gln His Leu Gln Ala Ala Ser Pro Ser Trp Leu
 340 345 350

Asp Thr Leu Lys Phe Ser Thr Thr Ser Leu Cys Cys Leu Val Gly Phe
 355 360 365

Thr Ala Ala Val Ala Thr Arg Lys Ala Thr Gly Pro Arg Arg Phe Arg
 370 375 380

Pro Arg Arg Phe Phe Pro Gly Asp Ser Ala Gly Leu Phe Pro Thr Ser
 385 390 395 400

Pro Ser Leu Ala Ile Pro His Pro Ser Val Gly Gly Ser Pro Ala Ser
 405 410 415

Leu Phe Ile Pro Ser Pro Pro Ser Phe Leu Pro Leu Ala Asn Gln Ala
 420 425 430

Ala Leu Pro Val Ser Ser Thr Asp Leu Thr Leu Leu Ile Cys Leu Ala
 435 440 445

Ala Ser Ala Gly Pro Ser Leu Trp Glu Pro Tyr Pro Leu
 450 455 460

<210> 275

<211> 600

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (460)..(460)

<223> n i s a , c , g , t o r u

<220>
 <221> misc_feature
 <222> (530)..(530)
 <223> n is a, c, g, t or u

<220>
 <221> misc_feature
 <222> (574)..(574)
 <223> n is a, c, g, t or u

<220>
 <221> misc_feature
 <222> (577)..(577)
 <223> n is a, c, g, t or u

<400> 275
 tcaagtctga cttgcatcta cactgcgggc aagatgcggc tgcaagaccg catcgccacg 60
 ttctttcttc caaaaggcat gatgctcacc acggctgcgc tgatgctctt cttcttacac 120
 ctgggcatct tcatcagaga cgtgcacaac ttctgcatca cctaccacta tgaccacatg 180
 agctttcact acacggtcgt cctgatgttc tcccagggtga tcagcatctg ctgggctgcc 240
 atgggggtcac tctatgctga gatgacagaa aacaagtacg tctgcttctc cgccctgacc 300
 atcctgagtg agtggcagga gggggagggt gcaagaggga gcggggagct ttggaaccct 360
 gagatgtggc aaggagtagc cagggaaagg tactggggct catggggggc tctgtcccc 420
 gccagtgct caacggagcc atgctcttca accgcctgtn cttggagttt ctggccatcg 480
 agtaccggga ggagcaccac tgaggcctgg ggagtcggaa cagggctaag gagggggaag 540
 caaaaggctg cctcgggtgt tttaataaag ctgntgntta tttccaaaaa aaaaaaaaaa 600

<210> 276
 <211> 174
 <212> PRT
 <213> Homo sapiens

<220>
 <221> UNSURE
 <222> (128)..(128)
 <223> Xaa is S, P, T or A

<220>
 <221> UNSURE
 <222> (151)..(151)
 <223> Xaa is M, T, K or R

<220>
 <221> UNSURE
 <222> (166)..(166)
 <223> Xaa is L, M or V

<220>
 <221> UNSURE
 <222> (167)..(167)
 <223> Xaa is F, L, I or V

<400> 276

Met Met Leu Thr Thr Ala Ala Leu Met Leu Phe Phe Leu His Leu Gly
 1 5 10 15

Ile Phe Ile Arg Asp Val His Asn Phe Cys Ile Thr Tyr His Tyr Asp
 20 25 30

His Met Ser Phe His Tyr Thr Val Val Leu Met Phe Ser Gln Val Ile
 35 40 45

Ser Ile Cys Trp Ala Ala Met Gly Ser Leu Tyr Ala Glu Met Thr Glu
 50 55 60

Asn Lys Tyr Val Cys Phe Ser Ala Leu Thr Ile Leu Ser Glu Trp Gln
 65 70 75 80

Glu Gly Glu Gly Ala Arg Gly Ser Gly Glu Leu Trp Asn Pro Glu Met
 85 90 95

Trp Gln Gly Val Ala Arg Glu Gly Tyr Trp Gly Ser Trp Gly Ala Leu
 100 105 110

Ser Pro Ala Gln Cys Ser Thr Glu Pro Cys Ser Ser Thr Ala Cys Xaa
 115 120 125

Trp Ser Phe Trp Pro Ser Ser Thr Gly Arg Ser Thr Thr Glu Ala Trp
 130 135 140

Gly Val Gly Thr Gly Leu Xaa Arg Gly Lys Gln Lys Ala Ala Ser Gly
 145 150 155 160

Val Leu Ile Lys Leu Xaa Xaa Ile Ser Lys Lys Lys Lys Lys
 165 170

<210> 277

<211> 457

<212> DNA

<213> Homo sapiens

<400> 277

aaacactgca ggctacgaat cggtcattgc atagggttttc catgaatcag gaagattcag 60

tcctggtaaa ttcattccca ggaacatcgc tgccactgct attattctag cagctgttcc 120

catactccaa tgagtccagt taaacatttg ccttcttggg tcatgtaaag gtggcctgaa 180

gactgccaga agaggctgaa gaactgccaa agtcatcact atacagccga ggtatgggtg 240

gtaacctgca tgcctactcc agcctcccct gtatataaac ggcataacaa aagcaatgca 300

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ggtgaggaca gttgtggtga acatgagcat ccgatgcacc tgaaaccaag ctgcttcacc 360
aagcaagaaa gcttttgacc aaactggctt gaagaaccgg gcaaccagta cacctatgct 420
aacagtagtc atccatgcca caaacattaa ggcacca 457

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<210> 278
<211> 144
<212> PRT
<213> Homo sapiens

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<400> 278

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Met Phe Val Ala Trp Met Thr Thr Val Ser Ile Gly Val Leu Val Ala
1           5           10           15

```

```

Arg Phe Phe Lys Pro Val Trp Ser Lys Ala Phe Leu Leu Gly Glu Ala
          20           25           30

```

```

Ala Trp Phe Gln Val His Arg Met Leu Met Phe Thr Thr Thr Val Leu
          35           40           45

```

```

Thr Cys Ile Ala Phe Val Met Pro Phe Ile Tyr Arg Gly Gly Trp Ser
          50           55           60

```

```

Arg His Ala Gly Tyr His Pro Tyr Leu Gly Cys Ile Val Met Thr Leu
65           70           75           80

```

```

Ala Val Leu Gln Pro Leu Leu Ala Val Phe Arg Pro Pro Leu His Asp
          85           90           95

```

```

Pro Arg Arg Gln Met Phe Asn Trp Thr His Trp Ser Met Gly Thr Ala
          100          105          110

```

```

Ala Arg Ile Ile Ala Val Ala Ala Met Phe Leu Gly Met Asn Leu Pro
          115          120          125

```

```

Gly Leu Asn Leu Pro Asp Ser Trp Lys Thr Tyr Ala Met Thr Asp Ser
          130          135          140

```

```

<210> 279
<211> 293
<212> DNA
<213> Homo sapiens

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<400> 279

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tttttttttt tttttttaag gctgaagcaa ataggaacgt atattttctca tgaatccaaa 60
gcaaagacac aggaagtgct ggcattcttt tggtggctgg tagctcttga ccttctcttc 120
aaggttgcca catgccttag cagcagctca tgacttcacg ttctcaccgt attcgaaggc 180

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aggaagcatg gagtagctgg cagctgcgtt tgacacagac tgccctcgga ccccttctcc 240
 gcgcagtgcg actcgcaatt gtctggagca cgttggcagc agccctcgtg ccg 293

<210> 280
 <211> 45
 <212> PRT
 <213> Homo sapiens

<400> 280

Arg His Glu Gly Cys Cys Gln Arg Ala Pro Asp Asn Cys Glu Ser His
 1 5 10 15

Cys Ala Glu Lys Gly Ser Glu Gly Ser Leu Cys Gln Thr Gln Leu Pro
 20 25 30

Ala Thr Pro Cys Phe Leu Pro Ser Asn Thr Val Arg Thr
 35 40 45

<210> 281
 <211> 15
 <212> PRT
 <213> Homo sapiens

<400> 281

Cys Gln Lys Gln Arg Asn Trp His Gly Ile Trp Arg Leu Glu Val
 1 5 10 15

<210> 282
 <211> 13
 <212> PRT
 <213> Homo sapiens

<400> 282

Met Ala Lys Gln Gly Glu Met Asn Thr Ser Thr Ser Cys
 1 5 10

<210> 283
 <211> 13
 <212> PRT
 <213> Homo sapiens

<400> 283

Pro Lys Arg Gly Gly Arg Ala Gly Arg Glu His Ser Cys
 1 5 10

<210> 284
 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 284

Arg	Phe	Gln	Arg	Asn	Thr	Gly	Glu	Met	Ser	Ser	Asn	Ser	Thr	Ala	Leu
1				5					10					15	

Ala	Leu	Val	Arg	Pro	Ser	Ser	Ser	Gly	Leu	Ile	Asn	Ser	Asn	Thr	Asp
			20					25					30		

Asn	Asn	Leu	Ala	Val	Tyr	Asp	Leu	Ser	Arg	Asp	Ile	Leu	Asn	Asn	Phe
		35					40					45			

Pro	His	Ser	Ile	Ala	Arg	Gln	Lys	Arg	Ile	Leu	Val	Asn	Leu	Ser	Met
	50					55					60				

Val	Glu	Asn	Lys	Leu	Val	Glu	Leu	Glu	His	Thr	Leu	Leu	Ser	Lys	Gly
65					70					75					80

Phe	Arg	Gly	Ala	Ser	Pro	His	Arg	Lys	Ser	Thr
				85					90	

<210> 285

<211> 15

<212> PRT

<213> Homo sapiens

<400> 285

Cys	Lys	Tyr	Arg	Arg	Phe	Gln	Arg	Asn	Thr	Gly	Glu	Met	Ser	Ser
1				5					10					15

<210> 286

<211> 14

<212> PRT

<213> Homo sapiens

<400> 286

Cys	Lys	Gly	Phe	Arg	Gly	Ala	Ser	Pro	His	Arg	Lys	Ser	Thr
1				5					10				

<210> 287

<211> 19

<212> PRT

<213> Homo sapiens

<400> 287

Met	Ala	Cys	Ile	Tyr	Pro	Thr	Thr	Phe	Tyr	Thr	Ser	Leu	Pro	Thr	Lys
1				5					10					15	

Ser Leu Asn

<210> 288
 <211> 121
 <212> PRT
 <213> Homo sapiens

<400> 288

Ala Pro Pro Ser Cys Arg Glu Cys Tyr Gln Ser Leu His Tyr Arg Gly
 1 5 10 15

Glu Met Gln Gln Tyr Phe Thr Tyr His Thr His Ile Glu Arg Ser Cys
 20 25 30

Tyr Gly Asn Leu Ile Glu Glu Cys Val Glu Ser Gly Lys Ser Tyr Tyr
 35 40 45

Lys Val Lys Asn Leu Gly Val Cys Gly Ser Arg Asn Gly Ala Ile Cys
 50 55 60

Pro Arg Gly Lys Gln Trp Leu Cys Phe Thr Lys Ile Gly Gln Trp Gly
 65 70 75 80

Val Asn Thr Gln Val Leu Glu Asp Ile Lys Arg Glu Gln Ile Ile Ala
 85 90 95

Lys Ala Lys Ala Ser Lys Pro Thr Thr Pro Pro Glu Asn Arg Pro Arg
 100 105 110

His Phe His Ser Phe Ile Gln Lys Leu
 115 120

<210> 289
 <211> 15
 <212> PRT
 <213> Homo sapiens

<400> 289

Cys Glu Asn Arg Pro Arg His Phe His Ser Phe Ile Gln Lys Leu
 1 5 10 15

<210> 290
 <211> 13
 <212> PRT
 <213> Homo sapiens

<400> 290

Cys Ile Tyr Pro Thr Thr Phe Tyr Thr Ser Leu Pro Thr
 1 5 10

<210> 291

<211> 14
 <212> PRT
 <213> Homo sapiens

<400> 291

Cys Lys Glu Asp Glu Leu Val Arg Asp Ser Pro Ala Arg Lys
 1 5 10

<210> 292
 <211> 12
 <212> PRT
 <213> Homo sapiens

<400> 292

Ala Leu Gly Thr Arg Leu Ser Gln His Thr Asp Val
 1 5 10

<210> 293
 <211> 11
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 <213> Homo sapiens

<400> 293

Asp Phe Asn Cys Pro Cys Leu Val His Tyr Asn
 1 5 10

<210> 294
 <211> 53
 <212> PRT
 <213> Homo sapiens

<400> 294

Ser Ser Ser Val Asp Pro Glu Lys Phe Leu Asp Phe Ala Asn Met Thr
 1 5 10 15

Pro Ser Gln Val Gln Leu Phe Leu Ala Lys Val Pro Cys Lys Glu Asp
 20 25 30

Glu Leu Val Arg Asp Ser Pro Ala Arg Lys Ala Val Ser Arg Tyr Leu
 35 40 45

Arg Cys Leu Ser Gln
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<210> 295
 <211> 146
 <212> PRT
 <213> Homo sapiens

<400> 295

Arg Cys Leu Arg Pro Cys Phe Asp Gln Thr Val Phe Leu Gln Arg Arg
1 5 10 15

Tyr Trp Ser Asn Tyr Val Asp Leu Glu Gln Lys Leu Phe Asp Glu Thr
20 25 30

Cys Cys Glu His Ala Arg Asp Phe Ala His Arg Cys Val Leu His Phe
35 40 45

Phe Ala Ser Met Arg Ser Glu Leu Gln Ala Arg Gly Leu Arg Arg Gly
50 55 60

Asn Ala Gly Arg Arg Leu Glu Leu Pro Ala Val Pro Glu Pro Pro Glu
65 70 75 80

Gly Leu Asp Ser Gly Ser Gly Lys Ala His Leu Arg Ala Ile Ser Ser
85 90 95

Arg Glu Gln Val Asp Arg Leu Leu Ser Thr Trp Tyr Ser Ser Lys Pro
100 105 110

Pro Leu Asp Leu Ala Ala Ser Pro Gly Leu Cys Gly Gly Gly Leu Ser
115 120 125

His Arg Ala Pro Thr Leu Ala Leu Gly Thr Arg Leu Ser Gln His Thr
130 135 140

Asp Val
145

<210> 296
<211> 1035
<212> PRT
<213> Homo sapiens

<400> 296

Met Pro Cys Gly Phe Ser Pro Ser Pro Val Ala His His Leu Val Pro
1 5 10 15

Gly Pro Pro Asp Thr Pro Ala Gln Gln Leu Arg Cys Gly Trp Thr Val
20 25 30

Gly Gly Trp Leu Leu Ser Leu Val Arg Gly Leu Leu Pro Cys Leu Pro
35 40 45

Pro Gly Ala Arg Thr Ala Glu Gly Pro Ile Met Val Leu Ala Gly Pro
50 55 60

Leu Ala Val Ser Leu Leu Leu Pro Ser Leu Thr Leu Leu Val Ser His
65 70 75 80

Leu Ser Ser Ser Gln Asp Val Ser Ser Glu Pro Ser Ser Glu Gln Gln
85 90 95

Leu Cys Ala Leu Ser Lys His Pro Thr Val Ala Phe Glu Asp Leu Gln
100 105 110

Pro Trp Val Ser Asn Phe Thr Tyr Pro Gly Ala Arg Asp Phe Ser Gln
115 120 125

Leu Ala Leu Asp Pro Ser Gly Asn Gln Leu Ile Val Gly Ala Arg Asn
130 135 140

Tyr Leu Phe Arg Leu Ser Leu Ala Asn Val Ser Leu Leu Gln Ala Thr
145 150 155 160

Glu Trp Ala Ser Ser Glu Asp Thr Arg Arg Ser Cys Gln Ser Lys Gly
165 170 175

Lys Thr Glu Glu Glu Cys Gln Asn Tyr Val Arg Val Leu Ile Val Ala
180 185 190

Gly Arg Lys Val Phe Met Cys Gly Thr Asn Ala Phe Ser Pro Met Cys
195 200 205

Thr Ser Arg Gln Val Gly Asn Leu Ser Arg Thr Ile Glu Lys Ile Asn
210 215 220

Gly Val Ala Arg Cys Pro Tyr Asp Pro Arg His Asn Ser Thr Ala Val
225 230 235 240

Ile Ser Ser Gln Gly Glu Leu Tyr Ala Ala Thr Val Ile Asp Phe Ser
245 250 255

Gly Arg Asp Pro Ala Ile Tyr Arg Ser Leu Gly Ser Gly Pro Pro Leu
260 265 270

Arg Thr Ala Gln Tyr Asn Ser Lys Trp Leu Asn Glu Pro Asn Phe Val
275 280 285

Ala Ala Tyr Asp Ile Gly Leu Phe Ala Tyr Phe Phe Leu Arg Glu Asn
290 295 300

Ala Val Glu His Asp Cys Gly Arg Thr Val Tyr Ser Arg Val Ala Arg
305 310 315 320

Val Cys Lys Asn Asp Val Gly Gly Arg Phe Leu Leu Glu Asp Thr Trp
325 330 335

Thr Thr Phe Met Lys Ala Arg Leu Asn Cys Ser Arg Pro Gly Glu Val
340 345 350

Pro Phe Tyr Tyr Asn Glu Leu Gln Ser Ala Phe His Leu Pro Glu Gln
355 360 365

Asp Leu Ile Tyr Gly Val Phe Thr Thr Asn Val Asn Ser Ile Ala Ala
370 375 380

Ser Ala Val Cys Ala Phe Asn Leu Ser Ala Ile Ser Gln Ala Phe Asn
385 390 395 400

Gly Pro Phe Arg Tyr Gln Glu Asn Pro Arg Ala Ala Trp Leu Pro Ile
405 410 415

Ala Asn Pro Ile Pro Asn Phe Gln Cys Gly Thr Leu Pro Glu Thr Gly
420 425 430

Pro Asn Glu Asn Leu Thr Glu Arg Ser Leu Gln Asp Ala Gln Arg Leu
435 440 445

Phe Leu Met Ser Glu Ala Val Gln Pro Val Thr Pro Glu Pro Cys Val
450 455 460

Thr Gln Asp Ser Val Arg Phe Ser His Leu Val Val Asp Leu Val Gln
465 470 475 480

Ala Lys Asp Thr Leu Tyr His Val Leu Tyr Ile Gly Thr Glu Ser Gly
485 490 495

Thr Ile Leu Lys Ala Leu Ser Thr Ala Ser Arg Ser Leu His Gly Cys
500 505 510

Tyr Leu Glu Glu Leu His Val Leu Pro Pro Gly Arg Arg Glu Pro Leu
515 520 525

Arg Ser Leu Arg Ile Leu His Ser Ala Arg Ala Leu Phe Val Gly Leu
530 535 540

Arg Asp Gly Val Leu Arg Val Pro Leu Glu Arg Cys Ala Ala Tyr Arg
545 550 555 560

Ser Gln Gly Ala Cys Leu Gly Ala Arg Asp Pro Tyr Cys Gly Trp Asp

565

570

575

Gly Lys Gln Gln Arg Cys Ser Thr Leu Glu Asp Ser Ser Asn Met Ser
 580 585 590

Leu Trp Thr Gln Asn Ile Thr Ala Cys Pro Val Arg Asn Val Thr Arg
 595 600 605

Asp Gly Gly Phe Gly Pro Trp Ser Pro Trp Gln Pro Cys Glu His Leu
 610 615 620

Asp Gly Asp Asn Ser Gly Ser Cys Leu Cys Arg Ala Arg Ser Cys Asp
 625 630 635 640

Ser Pro Arg Pro Arg Cys Gly Gly Leu Asp Cys Leu Gly Pro Ala Ile
 645 650 655

His Ile Ala Asn Cys Ser Arg Asn Gly Ala Trp Thr Pro Trp Ser Ser
 660 665 670

Trp Ala Leu Cys Ser Thr Ser Cys Gly Ile Gly Phe Gln Val Arg Gln
 675 680 685

Arg Ser Cys Ser Asn Pro Ala Pro Arg His Gly Gly Arg Ile Cys Val
 690 695 700

Gly Lys Ser Arg Glu Glu Arg Phe Cys Asn Glu Asn Thr Pro Cys Pro
 705 710 715 720

Val Pro Ile Phe Trp Ala Ser Trp Gly Ser Trp Ser Lys Cys Ser Ser
 725 730 735

Asn Cys Gly Gly Gly Met Gln Ser Arg Arg Arg Ala Cys Glu Asn Gly
 740 745 750

Asn Ser Cys Leu Gly Cys Gly Val Glu Phe Lys Thr Cys Asn Pro Glu
 755 760 765

Gly Cys Pro Glu Val Arg Arg Asn Thr Pro Trp Thr Pro Trp Leu Pro
 770 775 780

Val Asn Val Thr Gln Gly Gly Ala Arg Gln Glu Gln Arg Phe Arg Phe
 785 790 795 800

Thr Cys Arg Ala Pro Leu Ala Asp Pro His Gly Leu Gln Phe Gly Arg
 805 810 815

Arg Arg Thr Glu Thr Arg Thr Cys Pro Ala Asp Gly Ser Gly Ser Cys
820 825 830

Asp Thr Asp Ala Leu Val Glu Val Leu Leu Arg Ser Gly Ser Thr Ser
835 840 845

Pro His Thr Val Ser Gly Gly Trp Ala Ala Trp Gly Pro Trp Ser Ser
850 855 860

Cys Ser Arg Asp Cys Glu Leu Gly Phe Arg Val Arg Lys Arg Thr Cys
865 870 875 880

Thr Asn Pro Glu Pro Arg Asn Gly Gly Leu Pro Cys Val Gly Asp Ala
885 890 895

Ala Glu Tyr Gln Asp Cys Asn Pro Gln Ala Cys Pro Val Arg Gly Ala
900 905 910

Trp Ser Cys Trp Thr Ser Trp Ser Pro Cys Ser Ala Ser Cys Gly Gly
915 920 925

Gly His Tyr Gln Arg Thr Arg Ser Cys Thr Ser Pro Ala Pro Ser Pro
930 935 940

Gly Glu Asp Ile Cys Leu Gly Leu His Thr Glu Glu Ala Leu Cys Ala
945 950 955 960

Thr Gln Ala Cys Pro Glu Gly Trp Ser Pro Trp Ser Glu Trp Ser Lys
965 970 975

Cys Thr Asp Asp Gly Ala Gln Ser Arg Ser Arg His Cys Glu Glu Leu
980 985 990

Leu Pro Gly Ser Ser Ala Cys Ala Gly Asn Ser Ser Gln Ser Arg Pro
995 1000 1005

Cys Pro Tyr Ser Glu Ile Pro Val Ile Leu Pro Ala Ser Ser Met
1010 1015 1020

Glu Glu Ala Thr Asp Cys Ala Gly Phe Asn Leu Ile
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<211> 16

<212> PRT

<213> Homo sapiens

<400> 297

Cys Pro Tyr Asp Pro Arg His Asn Ser Thr Ala Val Ile Ser Ser Gln
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<210> 298
 <211> 11
 <212> PRT
 <213> Homo sapiens

<400> 298

Cys Pro Glu Val Arg Arg Asn Thr Pro Trp Thr
 1 5 10

<210> 299
 <211> 35
 <212> PRT
 <213> Homo sapiens

<400> 299

Glu Arg Val Trp Ser Asp Asp His Lys Asp Phe Asp Cys Asn Thr Arg
 1 5 10 15

Gln Pro Gly Cys Ser Asn Val Cys Phe Asp Glu Phe Phe Pro Val Ser
 20 25 30

His Val Arg
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<210> 300
 <211> 38
 <212> PRT
 <213> Homo sapiens

<400> 300

His Ser Phe Tyr Pro Lys Tyr Ile Leu Pro Pro Val Val Lys Cys His
 1 5 10 15

Ala Asp Pro Cys Pro Asn Ile Val Asp Cys Phe Ile Ser Lys Pro Ser
 20 25 30

Glu Lys Asn Ile Phe Thr
 35

<210> 301
 <211> 15
 <212> PRT
 <213> Homo sapiens

<400> 301

Cys Leu Pro Asp Arg Pro Arg Asp His Val Lys Lys Thr Ile Leu
 1 5 10 15

<210> 302
 <211> 13
 <212> PRT
 <213> Homo sapiens

<400> 302

Glu Arg Val Trp Ser Asp Asp His Lys Asp Phe Asp Cys
 1 5 10

<210> 303
 <211> 38
 <212> PRT
 <213> Homo sapiens

<400> 303

Asn Asn Asp Val Ser Cys Asp His Pro Ser Asn Thr Val Pro Ser Gly
 1 5 10 15

Ser Asn Gln Asp Leu Gly Ala Gly Ala Gly Glu Asp Ala Arg Ser Asp
 20 25 30

Asp Ser Ser Ser Arg Ile
 35

<210> 304
 <211> 15
 <212> PRT
 <213> Homo sapiens

<400> 304

Cys Asp His Pro Ser Asn Thr Val Pro Ser Gly Ser Asn Gln Asp
 1 5 10 15

<210> 305
 <211> 12
 <212> PRT
 <213> Homo sapiens

<400> 305

Cys Val Pro His Ser Arg Ser Arg Gly Pro Asn Leu
 1 5 10

<210> 306
 <211> 12
 <212> PRT
 <213> Homo sapiens

<400> 306

Cys Glu Leu Ser Gln Thr Pro His Pro His Ser Arg
 1 5 10

<210> 307
 <211> 14
 <212> PRT
 <213> Homo sapiens

<400> 307

Cys Leu Asp Ser Ala Gly Asn Asn Ala Gly Ile Gln Trp Gly
 1 5 10

<210> 308
 <211> 14
 <212> PRT
 <213> Homo sapiens

<400> 308

Cys Asn Arg Val Ser Lys Asn Pro Glu Met Leu Gln Thr Gly
 1 5 10

<210> 309
 <211> 2115
 <212> DNA
 <213> Homo sapiens

<400> 309

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ctgatgtctc ggctggatac tttaagattc agaaatactt catttttggc cccttccttc      180
tttcttttta caataaattc ttcttccttg tctgggtggga gtgtgaccag atgtgctgct      240
ggaaagatcc ccctggacac atttgctgcc gtatgtctgt tcatcacctt gctgggtctc      300
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gagagcaatg aacaaagaag cagaatccca cggacacact gccgggcaca tctcctcctg      480
tcagcagcct ccagcagagg aaaaaggttt ctaggagccg tggctcatgc tctggagtgc      540
ttttcttggc agaagaatgt gccagccatc tggactacaa aggcaccagg tggcacctgc      600
tctgcactga atggcattcg tgtcttgagt cttctttgga tcatctcggg acacaccagt      660
cagatgactg catggctgtc tttgggatgg aaagatggag ggcacgaaag gccactggtc      720
atgtctgggc catcagtggg aatcggagac accagagaag ccacgagtgg ttggttaagt      780
gcaagttcgt ttttaaagat gcatcagaat tcagacaaag gaataacccc caaaggcata      840
ctcagatact ttctcagtca cctggtaagg ttgcagcctc ttcacctgta ttcaatgtgc      900
ttgttggttg gactgttctc tcttgttccc tggggacctg tctgggaaat gcccaaattc      960
cactgggata actgccggca agcatggtgg acgaatctgc tgttgctaaa taactttgtg     1020

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tcggtcaaga atgctgcaaa tggctggacc tggtagcttg ccaatgactt ccagttccac 1080
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<210> 310
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<212> PRT
<213> Homo sapiens

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<400> 310
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Met Arg Ile Cys Tyr Glu Cys Gln Asn Glu Arg Thr Leu Trp Arg Cys
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Val Ser Gln Asp Gly Ala Asp Tyr Ser Val Gly Val Cys Val Pro Asp
          20           25           30

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Ser Cys Ala Glu Glu Asp Val Thr Leu Met Ser Arg Leu Asp Thr Leu
          35           40           45

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Arg Phe Arg Asn Thr Ser Phe Leu Ala Pro Ser Leu Phe Leu Phe Thr
          50           55           60

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Ile Asn Ser Ser Ser Leu Ser Gly Gly Ser Val Thr Arg Cys Ala Ala
65 70 75 80

Gly Lys Ile Pro Leu Asp Thr Phe Ala Ala Val Cys Leu Phe Ile Thr
85 90 95

Leu Leu Gly Leu Ile Leu Pro Pro Ala Gly Thr Val Cys Val Ala Ala
100 105 110

Arg Glu Trp Gly Ser Ala Cys Arg Thr Ser Arg Glu His Gly Glu Pro
115 120 125

Leu Ala Thr Tyr Gly Ser Leu Pro Leu Ser Glu Ala Glu Ser Asn Glu
130 135 140

Gln Arg Ser Arg Ile Pro Arg Thr His Cys Arg Ala His Leu Leu Leu
145 150 155 160

Ser Ala Ala Ser Ser Arg Gly Lys Arg Phe Leu Gly Ala Val Ala His
165 170 175

Ala Leu Glu Cys Phe Ser Trp Gln Lys Asn Val Pro Ala Ile Trp Thr
180 185 190

Thr Lys Ala Pro Gly Gly Thr Cys Ser Ala Leu Asn Gly Ile Arg Val
195 200 205

Leu Ser Leu Leu Trp Ile Ile Ser Gly His Thr Ser Gln Met Thr Ala
210 215 220

Trp Leu Ser Leu Gly Trp Lys Asp Gly Gly His Glu Arg Pro Leu Val
225 230 235 240

Met Ser Gly Pro Ser Val Gly Ile Gly Asp Thr Arg Glu Ala Thr Ser
245 250 255

Gly Trp Leu Ser Ala Ser Ser Phe Leu Lys Met His Gln Asn Ser Asp
260 265 270

Lys Gly Ile Thr Pro Lys Gly Ile Leu Arg Tyr Phe Leu Ser His Leu
275 280 285

Val Arg Leu Gln Pro Leu His Leu Tyr Ser Met Cys Leu Leu Val Gly
290 295 300

Leu Phe Ser Leu Val Pro Trp Gly Pro Val Trp Glu Met Pro Lys Phe
305 310 315 320

His Trp Asp Asn Cys Arg Gln Ala Trp Trp Thr Asn Leu Leu Leu Leu
 325 330 335

Asn Asn Phe Val Ser Val Lys Asn Ala Cys Asn Gly Trp Thr Trp Tyr
 340 345 350

Leu Ala Asn Asp Phe Gln Phe His Leu Thr Thr Pro Val Ile Ile Phe
 355 360 365

Ile His Val Lys Ser Thr Gln Ile Leu Ile Leu Leu Gly Ala Met Leu
 370 375 380

Phe Leu Ala Ser Phe Thr Ala Thr Ala Leu Ile Thr Leu Ala Tyr Lys
 385 390 395 400

Leu Pro Val Val Ala Pro Ser Glu Thr Arg Thr Ser Arg Gly Gly Leu
 405 410 415

Leu Asn Ala Arg Leu Phe Thr Leu Cys Pro Leu Val His Gly Lys Ser
 420 425 430

Gly Tyr Glu Thr Phe Gly Leu Asp Gly Lys Ala Asp Cys Leu Leu Ala
 435 440 445

Ser Lys Leu Leu Asn Leu Ser Thr Cys Thr Gly Asn Glu Gln Val Cys
 450 455 460

Pro Lys Cys Thr Phe Gly Leu Ala Asp Tyr Ser Asn Gly His Leu Arg
 465 470 475 480

Asp Leu Asp Ser Leu Cys His Val Gln Ile Lys His Asn Ile Leu Ala
 485 490 495

Tyr Phe Leu Val Phe Phe Ser Glu Glu Ala Ile Val Leu Tyr Phe Val
 500 505 510

Glu Tyr Tyr Thr Lys Pro Tyr Cys Arg Phe Gly Pro Val Leu Val Gly
 515 520 525

Leu Phe Leu Ser Ile Tyr Met His Gln Asn His Gln Glu Asn Ile Leu
 530 535 540

Arg Thr Lys Leu Gln Leu Ser Thr Lys Pro Ser Thr Gly Pro Cys Gly
 545 550 555 560

Arg Arg Leu Trp Ala Glu Ser Ser Leu Arg Ala Thr Glu Asp Met Glu

565

570

575

Val Trp Lys Arg Leu Gln Ala Leu Leu Ser Gly Ser His Pro Val Pro
 580 585 590

Leu Lys Val Thr Asn Arg Thr His Arg Arg Ala Lys Gln Ile Lys Gly
 595 600 605

Phe Asn Gly Lys Glu Ser Ser Pro Gly Leu Val Asn Arg Val Leu Ser
 610 615 620

Trp Asp Ile Trp Ser Phe Leu Ser Ser Ile Ser Tyr Ala Arg Tyr Leu
 625 630 635 640

Val His Pro Ile Leu Ile Ile Leu Tyr Asn Gly Leu Gln Glu Thr Leu
 645 650 655

Ile His His Thr Asp Thr Asn Met Phe Tyr Leu Phe Ser Gly His Arg
 660 665 670

Val Leu Thr Phe Val Thr Gly Leu Ala Leu Thr Leu Phe Ile Glu Lys
 675 680 685

Pro Cys Gln Glu Leu Lys Gln His Leu Leu Gly His Glu Cys Ser Gly
 690 695 700

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 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 311
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21

<210> 312
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligonucleotide

<400> 312
 acattcatgg cccagcagg

19